VOLUME XLII NUMBER FOUR

THE NATIONAL GEOGRAPHIC MAGAZINE

OCTOBER, 1922

CONTENTS

SPECIAL MAP SUPPLEMENT—AFRICA
(Size, 32 x 28)

Transporting a Navy Through the Jungles of Africa in War Time
With 31 Illustrations FRANK J. MAGEE, R. N. V. R.

Peoples and Places of Northern Africa
Sixteen Full-page Engravings

Along the Nile, Through Egypt and the Sudan
With 29 Illustrations FREDERICK SIMPICH

The Land of the Free in Africa
With 22 Illustrations HARRY A. McBRIDE

African Scenes from the Equator to the Cape
Sixteen Full-page Engravings

Our New Map of Africa

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ARTICLES and photographs are desired. For material which the Magazine can use, generous remuneration is made. Contributions should be accompanied by an addressed return envelope and postage.

IMMEDIATELY after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resultant given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

AT an expense of over $50,000 The Society sent a notable series of expeditions into Peru to investigate the traces of the Inca race. Their discoveries form a large share of our knowledge of a civilization which was waning when Pizarro first set foot in Peru.

THE Society also had the honor of subscribing a substantial sum to the historic expedition of Admiral Peary, who discovered the North Pole.

NOT long ago The Society granted $25,000, and in addition $75,000 was given by individual members through The Society to the Federal Government when the congressional appropriation for the purchase was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people and incorporated into a National Park.

THE Society is conducting extensive explorations and excavations in northwestern New Mexico, which was one of the most densely populated areas in North America before Columbus came, a region where prehistoric peoples lived in vast communal dwellings whose ruins are ranked second to none of ancient times in point of architecture, and whose customs, ceremonies and name have been engulfed in an oblivion more complete than any other people who left traces comparable to theirs.

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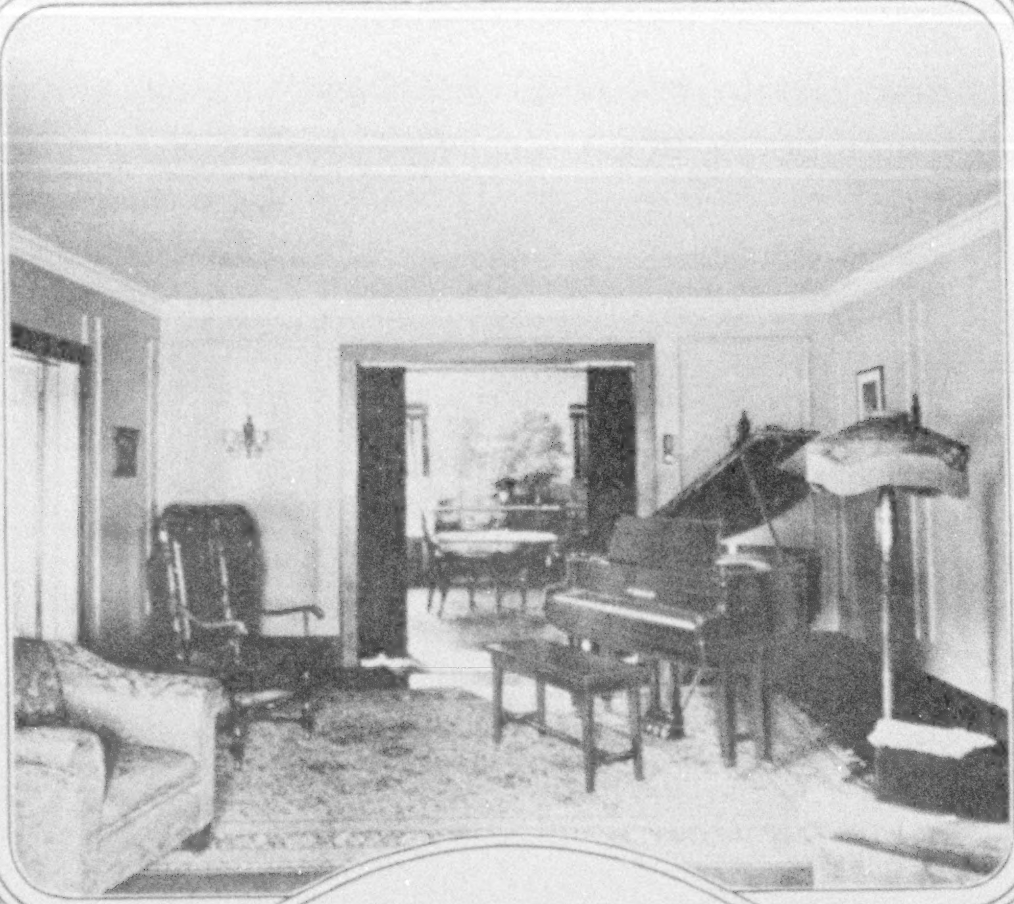

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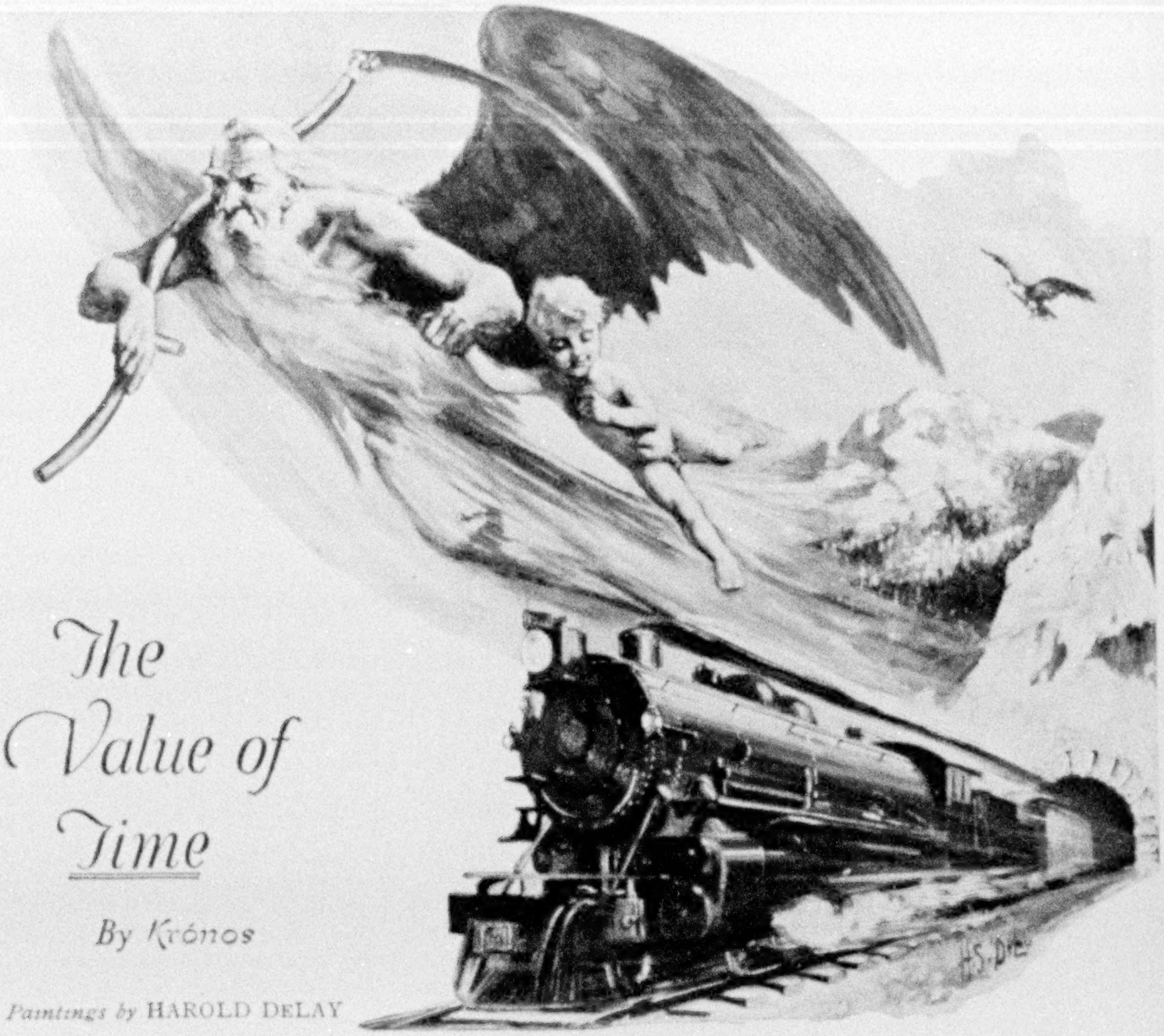

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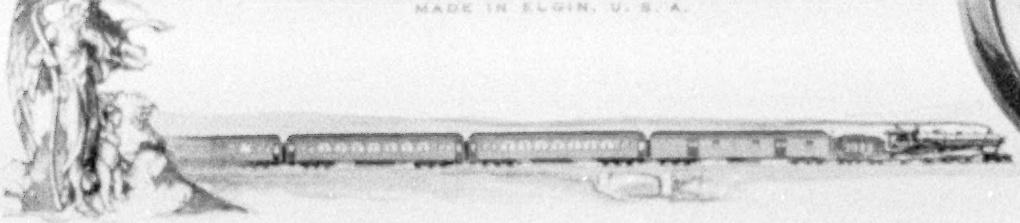

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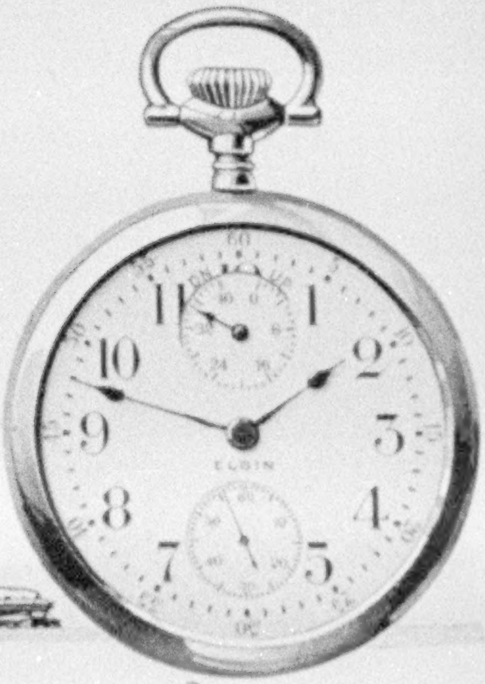

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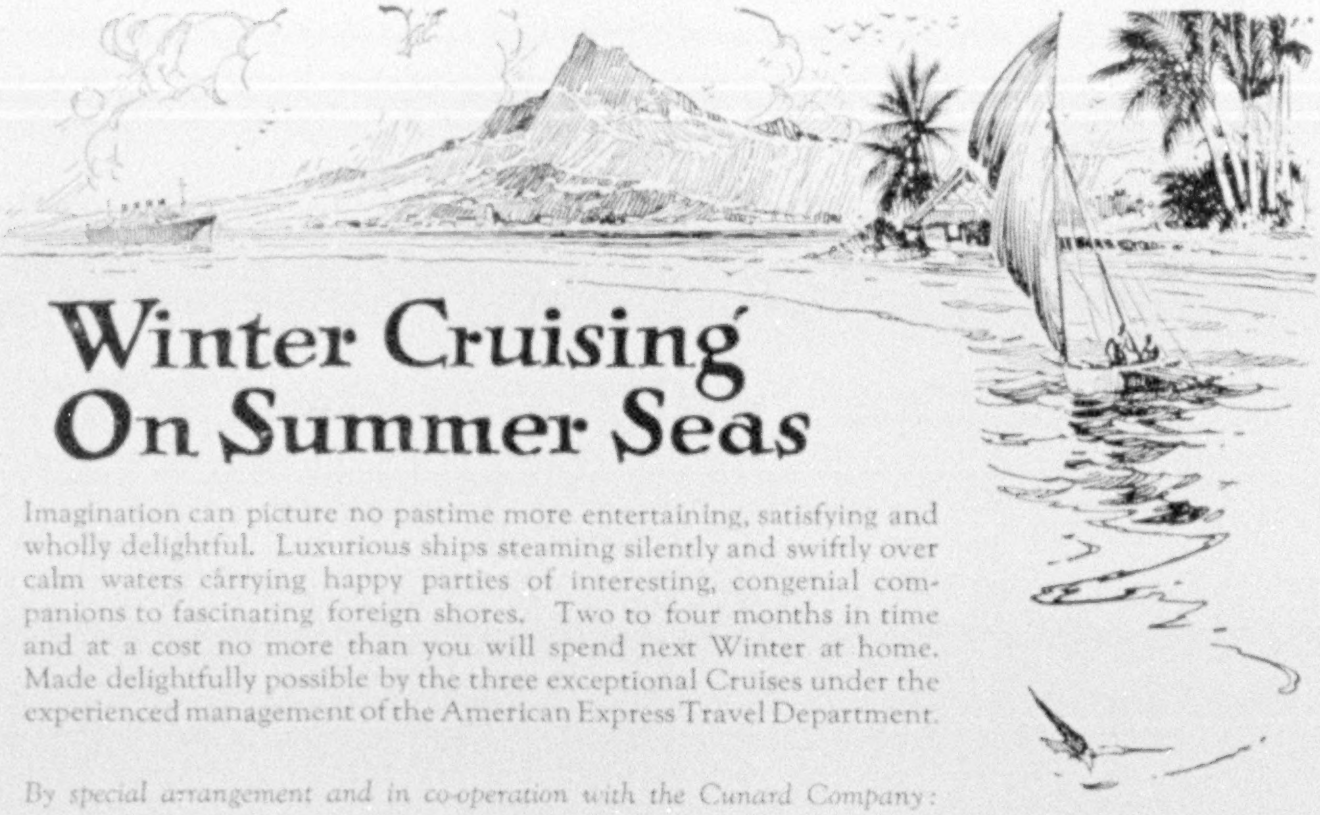

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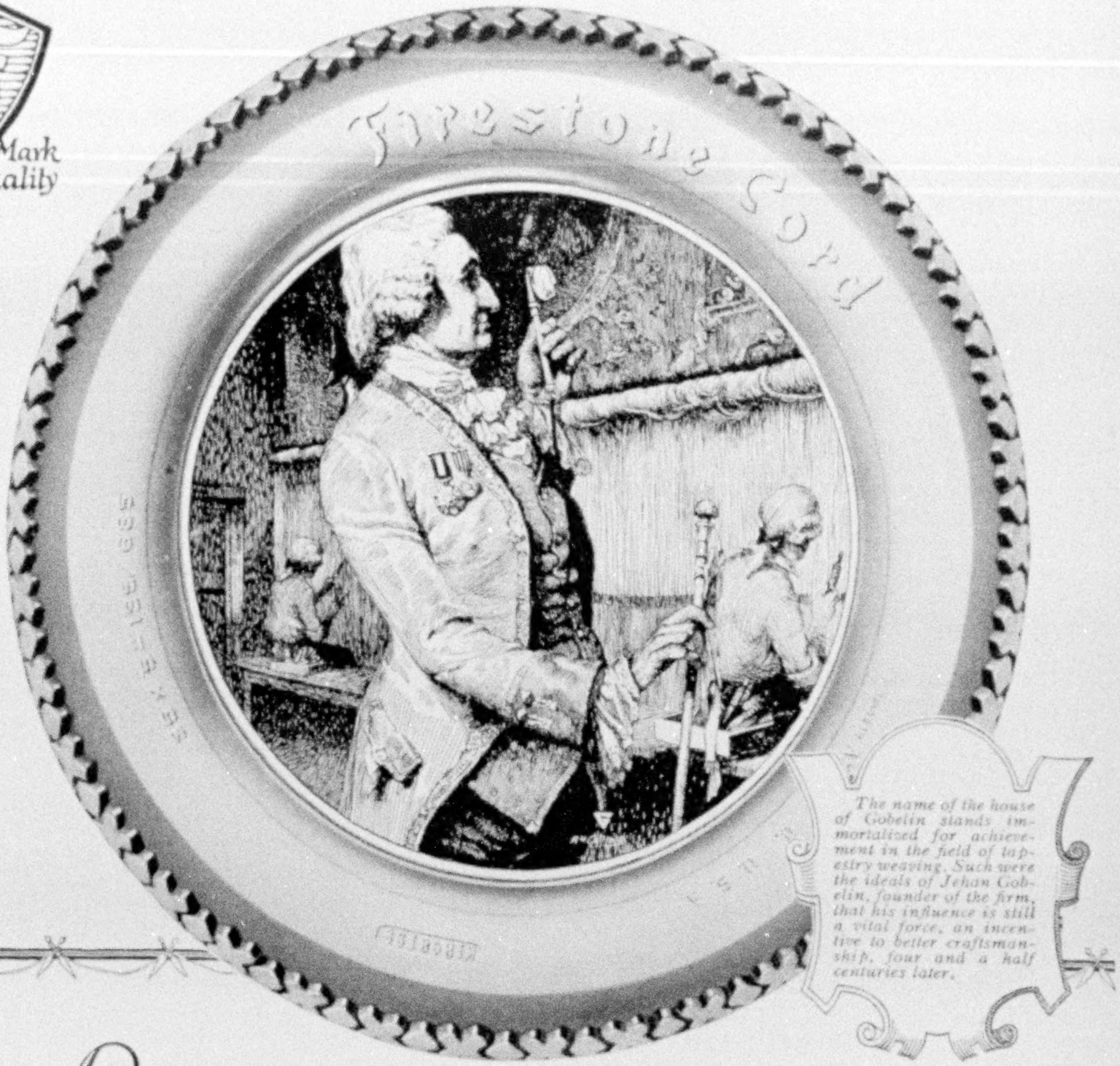

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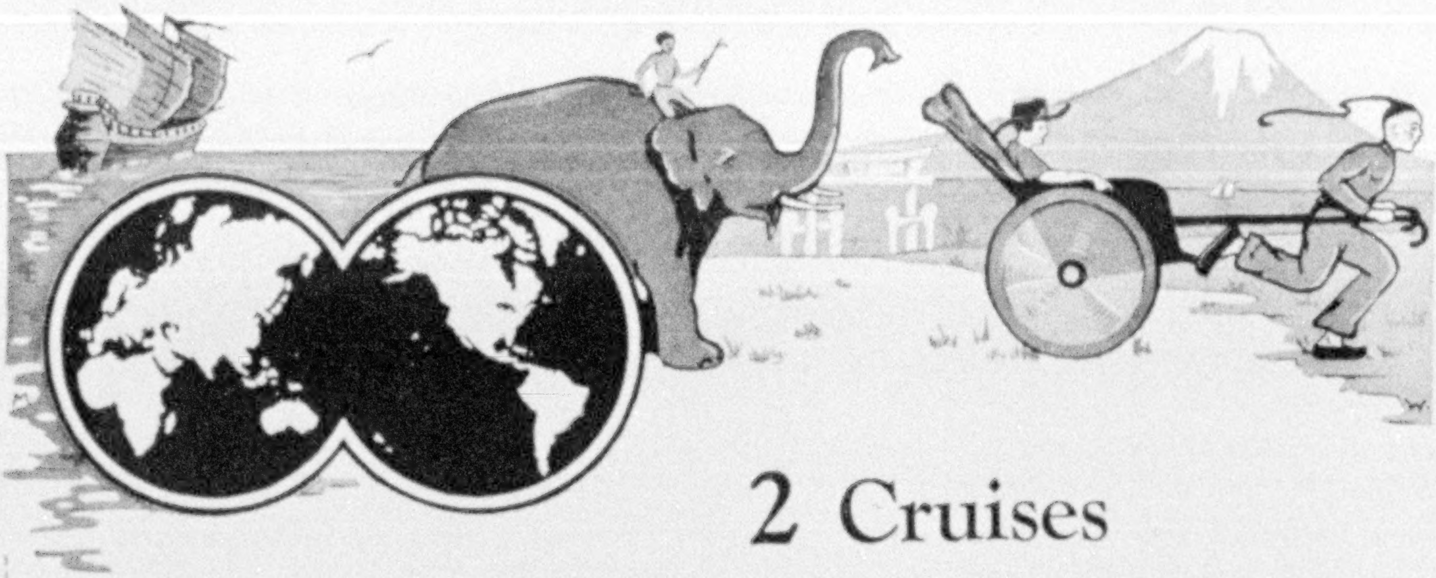

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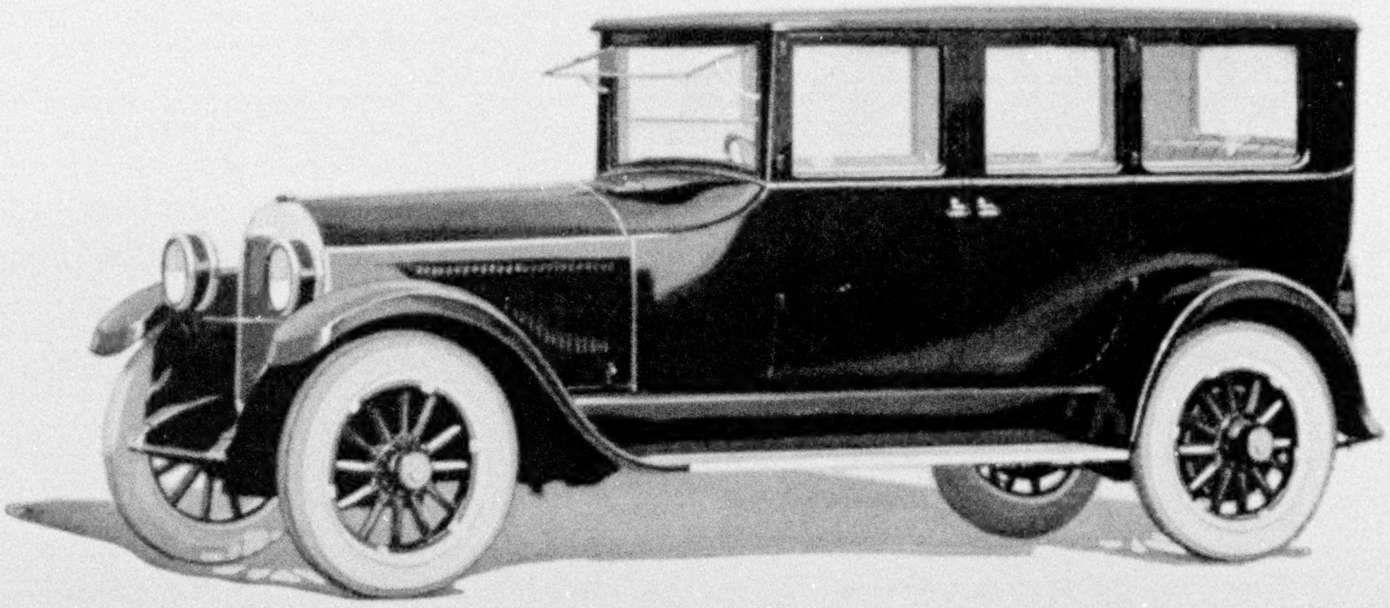

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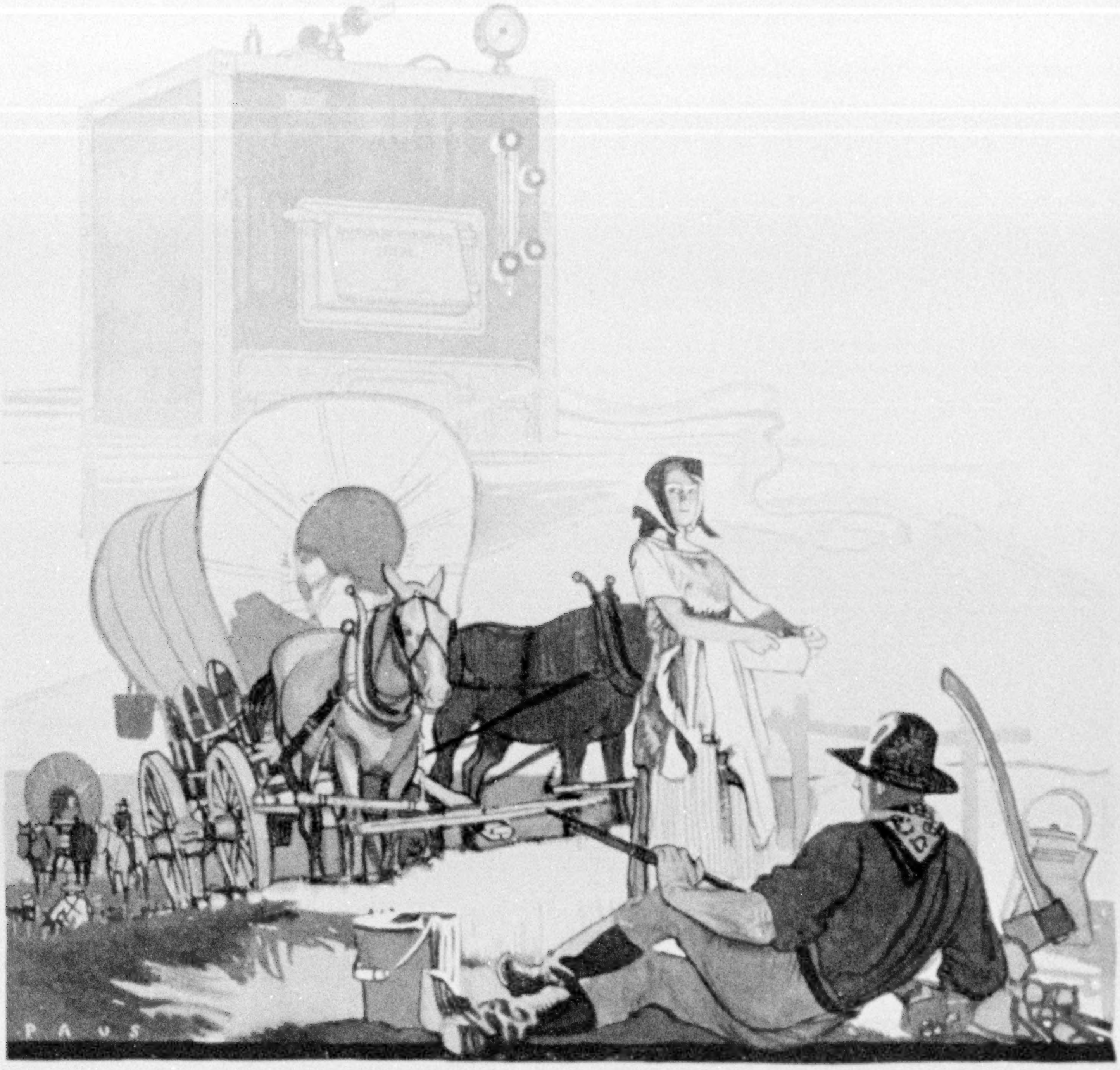

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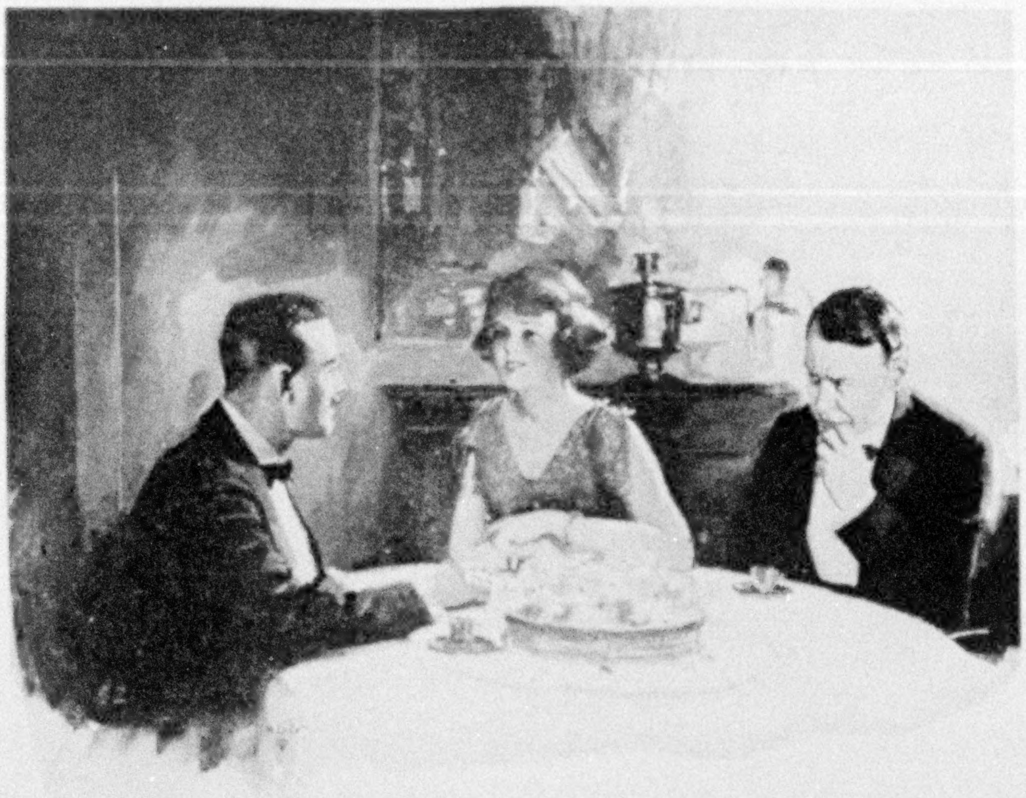

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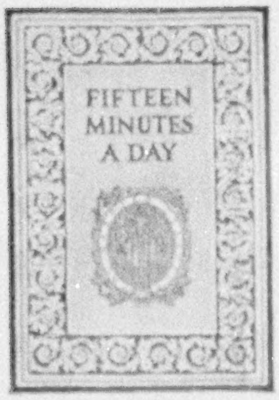

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TRANSPORTING A NAVY THROUGH THE JUNGLES OF AFRICA IN WAR TIME

BY FRANK J. MAGEE, R. N. V. R.

With Illustrations from Photographs by the Author

No single achievement during the World War was distinguished by more bizarre features than the successfully executed undertaking of 28 daring men who transported a "ready-made" navy overland through the wilds of Africa to destroy an enemy flotilla in control of Lake Tanganyika. With the conflict in Europe as the motive background, one of the participants and directors in this amazing adventure recites in his own way here the incidents of a jungle journey which has no counterpart in the history of African exploration.—THE EDITOR.

EARLY in the summer of 1915 J. R. Lee arrived in England from Africa and laid a plan before the authorities that were in session at the British Admiralty.

He proposed that the government send, by an overland route across Africa, two small boats to the assistance of the Belgian forces on Lake Tanganyika. Lee, having lived in Africa for some years and possessing an intimate knowledge of its geography, offered to act as guide.

At first the authorities were inclined to pass over the proposal, so highly impossible did it appear; but a special conference was called at the Admiralty, and after the project had been weighed it was decided that a small expedition should be sent. A forlorn hope, surely. But what were the lives of a handful of men thrown in the balance against what might be achieved?

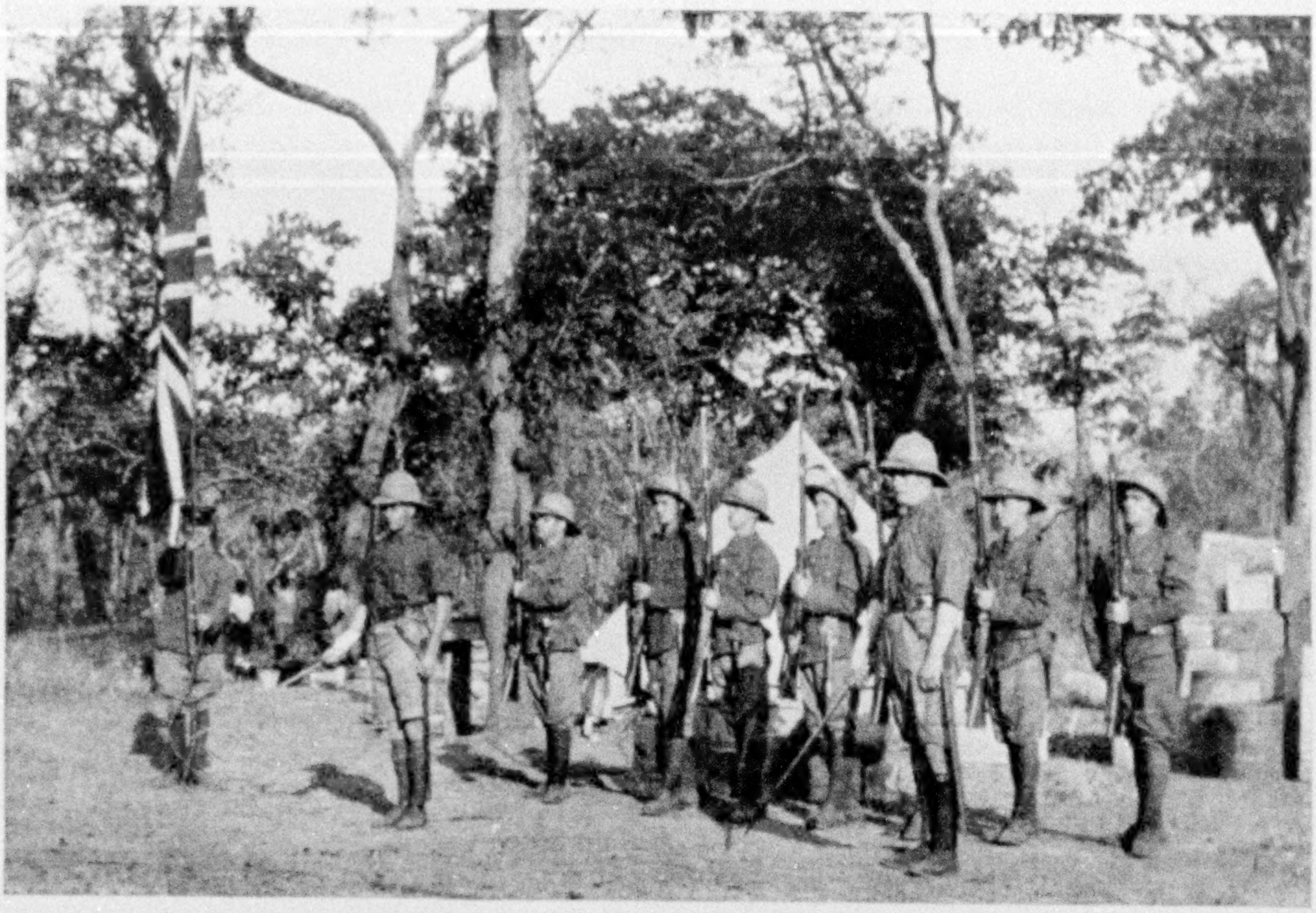
The task of organizing the Naval Africa Expedition, as it was called, was entrusted to Commander Spicer Simson, R. N., who was given a free hand in the selection of officers and men, 28 all told. He was allowed to choose his crew from any branch of the service. J. R. Lee was given the rank of lieutenant, and other officers with a knowledge of bush life and transport were chosen. A doctor specially skilled in the treatment of tropical diseases, and navy gunners with exceptional gunnery records, were also selected.

THE SMALLEST EXPEDITION AGAINST THE ENEMY DURING THE WAR

This expedition was the smallest sent against the enemy during the war, and, with the exception of the commander, all its members were volunteers. We carried no passengers, all officers and men being specialists in their particular lines.

It was important that no news of the departure or object of the expedition should leak out and get to the enemy. Consequently, officers and men were put on their honor not to divulge, even to their nearest and dearest, where they were bound nor what was their mission.

Two boats were selected, tried, and found suitable. They were 40-foot motor-boats, with 8-foot beams, capable of doing 18 knots.



HOISTING THE NAVAL AFRICA EXPEDITION'S UNION JACK IN THE FIRST CAMP AT FUNGURUME

Fungurume, 100 miles beyond Elizabethville, was the railhead in Cecil Rhodes' "Cape-to-Cairo" project in 1915. Here the expedition detrained the boats and started its grueling journey through the heart of the Dark Continent. During the last seven years the line has been extended to Sankisia (see K-11, Map of Africa Supplement)

While preparations were being pushed in England, Lieutenant Lee and I left for Africa on May 22, 1915, going ahead of the main body to select a route across the African bush from the point where the boats would be taken off the train.

It was important that a route as free as possible from hills, gorges, etc., yet close to water, should be chosen, as our boats were to be taken over this trail intact, each drawn by a traction engine.

Great difficulty was experienced in finding a suitable route over which to make our road, owing to the hilly nature of the country, as well as to the long stretches of marshland, the breeding ground of malaria-carrying mosquitoes. But at last a route was selected and thousands of natives were recruited from the adjacent villages and set to work under white supervision literally to carve a passage through the bush.

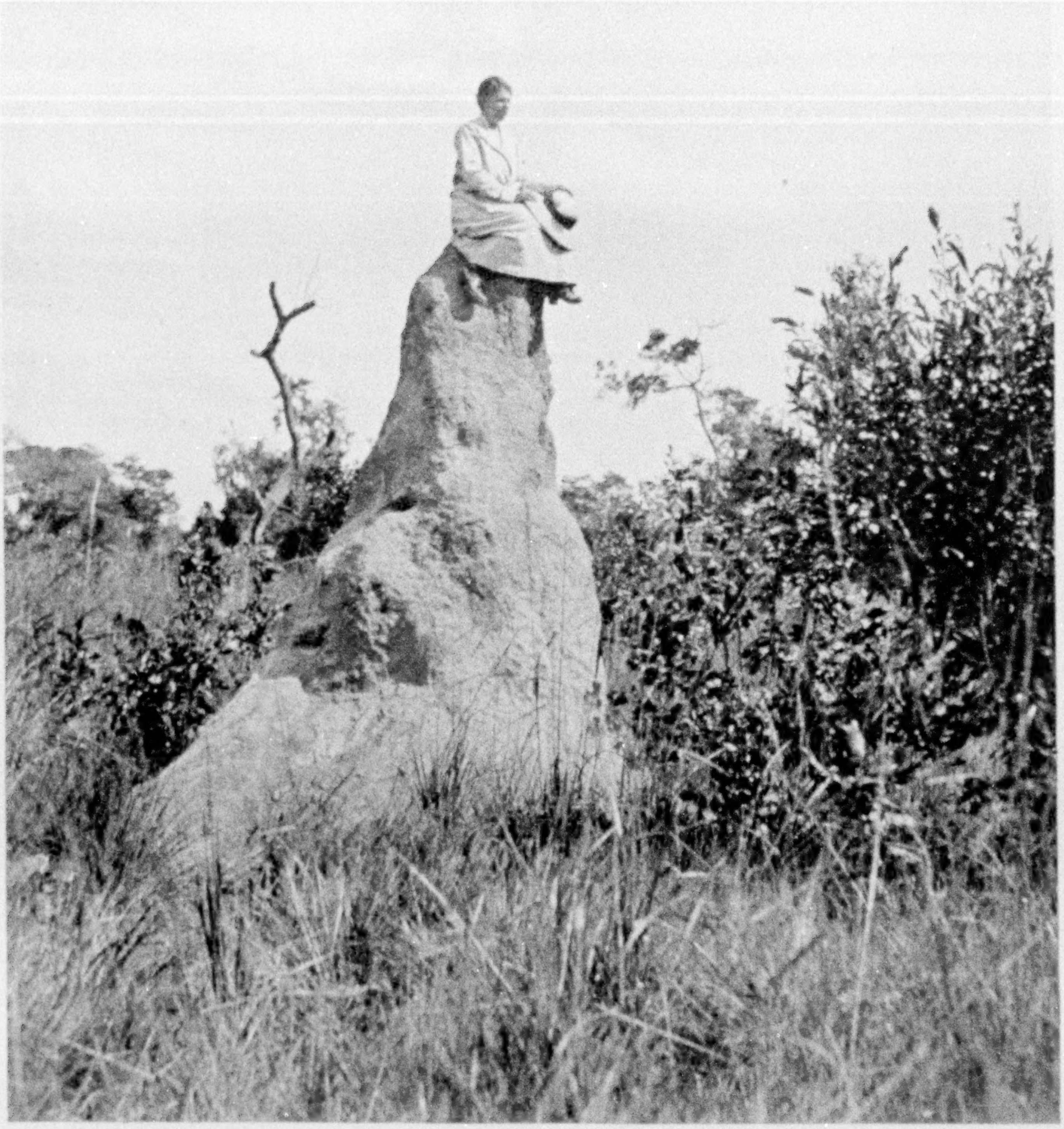
Where slopes were too steep they were leveled down. Bridges, constructed from timber growing on the spot, were thrown across river beds. Giant trees, when blocking our path, were uprooted with dynamite. Rocks and boulders were treated in a similar manner.

CARVING A 146-MILE ROAD THROUGH AFRICAN BUSH

Our biggest problem was a dried-up gorge, 40 yards wide and about 20 yards deep. This we filled up completely with tree trunks.

Thousands of trees were cleared out of the way. The enormity of this task may be appreciated better by the reader when he learns that so dense was the growth of the bush in some sections of the route that it was possible to travel for several days at a time and get only an occasional glimpse of the sky through the tangled foliage overhead. So the 146-mile roadway was pushed ahead, making, as it progressed, an unavoidable climb over a plateau 6,000 feet above sea-level.

But to return to our main party and the

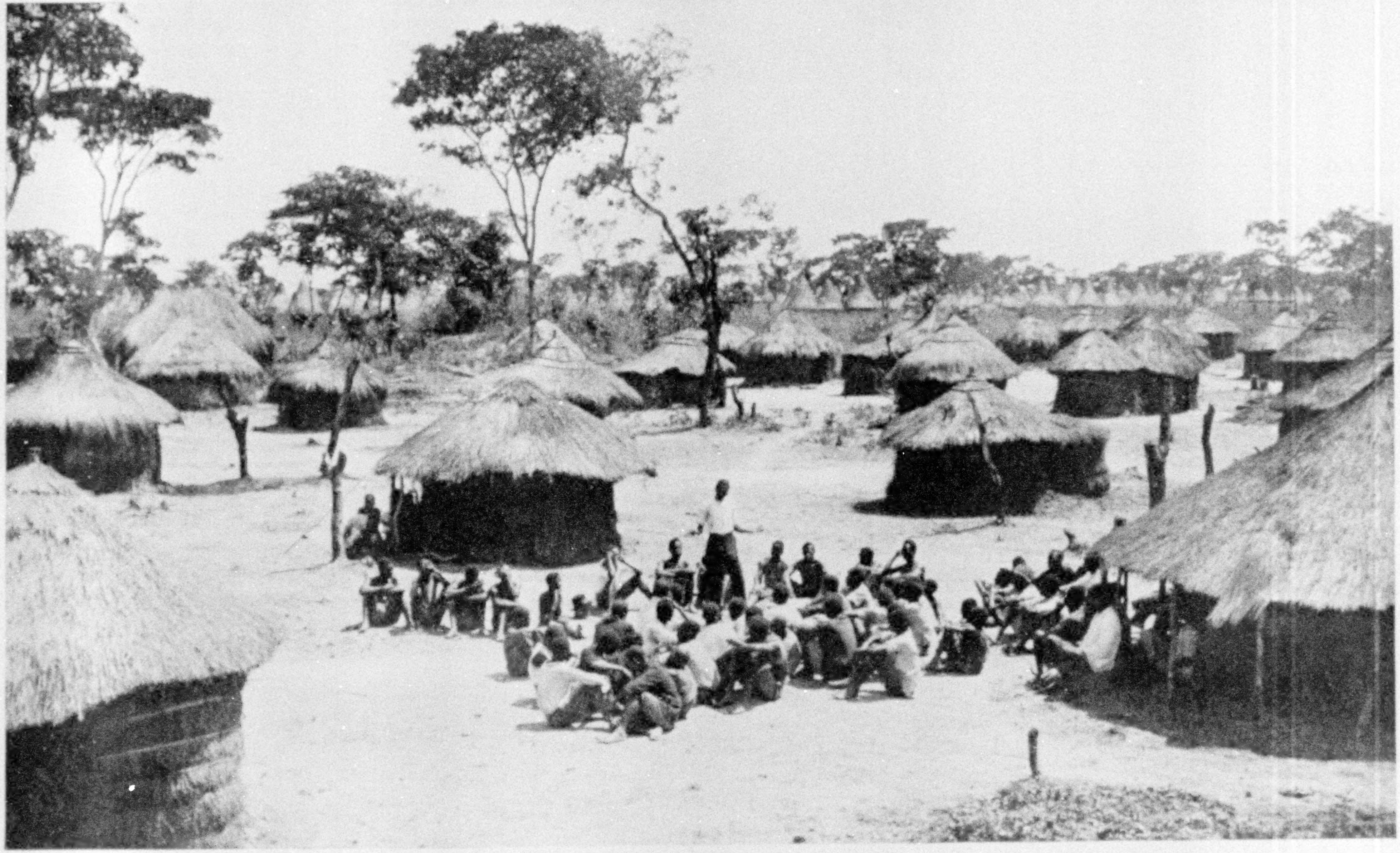


WHITE ANT-HILL NEAR ELIZABETHVILLE, BELGIAN CONGO

White ants, or termites, are the bane of Central Africa. Their clay hills, some of which are 40 feet high, dot many regions. They cut through leather and wood and eat away the floors and wooden supports of houses. Thousands often sally forth to make a concerted attack on an enemy or to take possession of a human habitation.

motor-boats, *Mimi* and *Tou-Tou*. They left England on the steamship *Llanstephan Castle* on June 12, 1915, for Cape Town. The motor-boats were stowed on deck in specially constructed cradles. At Cape Town they were transferred to railway trucks, and after a journey of 2,488 miles they arrived at Elizabethville, in the Belgian Congo. (See Map of Africa, K-12, issued as a supplement with this number of THE GEOGRAPHIC.) Here the expedition remained a few days, making final arrangements for its trek across country.

The members of the expedition were fêted by the Belgian populace, who, however, were not a bit optimistic about the outcome of our efforts to reach the lake. Among the sporting fraternity of this township the betting against our getting through was 100 to 1. However, "It's dogged as does it" was our watchword,



NATIVE PASTOR CONDUCTING RELIGIOUS SERVICE IN A KRAAL: ELIZABETHVILLE, BELGIAN CONGO

Elizabethville is the boom town of the Congo. Before the advent of the railroad, in 1910, it was a "geographical expression" in the jungle, dominated by huge ant-hills. Now it is the center of the Katanga District copper industry and knows such comforts as ice, bath-tubs, running water, tennis courts, golf links, and electric lights. Belgian missionaries have labored to civilize its 12,000 native inhabitants and have also taught them various useful trades.

and we left the Belgian town full of hope and bearing the good wishes of the townsfolk, who turned out in force to see us off.

In the course of a few days we reached the railhead, and that is where the real business started. The depot was called Fungurume (midway between Chilongo and Kambove). Here the boats were detrained, still in their cradles, and mounted on specially constructed carriages fitted with rubber-tired wheels.

ALL SUPPLIES CARRIED ON HEADS OF NATIVES

In the meantime stores were being sent ahead by native carriers, each boy carrying on his head a load weighing about 60 pounds. Provisions, ammunition, and petrol for the motor-boats were all transported in this fashion, our string of native carriers extending in single file for miles. There being no coal in this country, we had to rely on wood chopped en route, stacks of which had been prepared in readiness by the advance party.

Writing of native carriers reminds me that it was customary for them to chant or sing as they jogged along. Some of those whose villages had been situated near white settlements had learned English hymns in the local mission homes. They had memorized the tune and words, but they had no comprehension of the actual meaning of the words. Imagine, therefore, a crowd of natives on the march, each carrying a load of some 60 pounds on his head, with a prospect of a 30-mile trek under a blazing sun, singing such a hymn as "Now the Laborer's Task Is O'er."

About this time we lost our guide and the originator of the expedition, Lieutenant Lee, sunstroke and fever obliging him to go to the hospital.

By about the middle of August the expedition made a start, with boats and all gear, from Fungurume on the 146-mile journey through the bush, escorted by an armed guard of Askaris (native Belgian soldiers).

A detachment with a powerful motor lorry, carrying a supply of provisions, tents, and general camp gear, went ahead to select a suitable spot for camping each evening, to erect tents, and to prepare food for the main body following.

And so, early in the coolness of an African morning, we turned our backs on civilization and all that it meant, to fade away, but for a short time, we hoped, into the heart of the African bush.

However, "coming events cast their shadows before," and shortly after we got on the move we had a taste of what was in store for us in the way of trouble. Within one hour of leaving Fungurume the wheels of the leading traction engine became embedded in the earthwork and timber of a ford across a small stream, the strength of the ford being insufficient to stand the weight of the engine. Thus two precious days were wasted in getting the engine out of difficulties.

I say "precious" days because the rainy season was not far off, and it must be remembered that, once the rainy season starts in Central Africa, it rains for weeks almost without a break, in solid sheets of water. Small streams become swollen torrents, carrying everything before their mad rush; lower levels become enormous shallow lakes, and all roads and tracks are obliterated.

In addition to this, one good rainfall would render useless our stacks of wood fuel all along the route.

Getting on the move again, we reached Mofia, 14 miles distant. This was not a bad day's work, considering the difficulties. From this point to the native village of Wendi Macosi the roads were fairly good.

TRACTION ENGINES CAUSE CONSTERNATION AMONG NATIVES

Needless to say, the arrival of two iron monsters in the form of our tractors, belching forth smoke, caused considerable consternation among the natives of this village. They deserted their homes and fled to the bush. But when the chief and his headmen were assured that the engines were harmless, the natives returned to their village, and soon came to us, bringing offerings of fruit, vegetables, chickens, and goats.

This happened in most of the villages we passed through, but now and then we encountered a tribe not too kindly disposed toward white people. We carried an ample supply of tinned foods; but fresh meat being preferable, we obtained

WHERE THE REAL WORK BEGAN

At Fungurume, the end of the railway and valley gateway to the central African bush, the expedition's boats were unloaded, still in their traveling cradles, and mounted on rubber-tired carriages. Then began an incredibly laborious trek under a blazing sun. Supplies were forwarded in advance by an army of native carriers.

all we wanted for both the members of the expedition and our hordes of native carriers from enormous herds of buck met with from time to time. Wild pig and guinea-fowl were also plentiful and provided satisfactory rations.

In a sense, the native chiefs were rather disappointing to the eye. Generally, one looked in vain for the flowing head-dress of gorgeous feathers and the leopard skin slung from brawny shoulders. They were for the most part attired in—well, nothing to speak of, except in the case of native personages.

SPATS, OPERA HAT, AND PINK SUNSHADE PART OF NATIVE CHIEF'S UNIFORM

The prevailing mode among these petty potentates seemed to be obsolete uniforms of all armies. One old chief, I remember, was attired in an old British militia tunic and a pair of spats, his crowning glories being an opera hat and a pink sunshade. I was aware that a big business in out-of-date uniforms is carried on between traders and these tribes, but the origin of the spats and pink sunshade puzzled me somewhat until I remembered we were in the land of reputed cannibals.

After leaving Wendi Macosi we struck some bad spots, but all members of the expedition put their backs into the work, hauling on ropes, bringing in wood, and patching up holes in the road. In fact, they did their best on all occasions, and nothing went amiss.

A fine example was set by the commander. He went around encouraging his officers and men with a kindly word (and sometimes a curse), and so got things done. Thus, under the pitiless glare of a tropical sun, the race against the coming rains went on.

One of our greatest handicaps was lack of water, both for drinking purposes and for the engines. Often for days at a time we went without a wash in order that the engines might have their fill. This may appear to have been no great hardship, but in the tropics a bath is a tonic and means a great deal. On some occasions, too, the water was so muddy that it had

CARVING A PASSAGE THROUGH THE AFRICAN BUSH: BRIDGE-BUILDING

Blistered by the glare of a tropical sun and tortured by insect pests, the expedition doggedly hewed a 146-mile road over hill and through valley, across river and stream. Slopes too steep to climb were leveled; bridges, constructed of timber growing on the spot, were thrown across river beds; gorges were filled in with trunks of trees, and rocks, boulders, and giant trees were dynamited to clear a path.

to be strained through mosquito netting before it was fit to drink.

Once the engines ran dry. This was a serious matter, and native women from local villages were commandeered to fetch water. They carried it in gourds and jars on their heads from a water-hole eight miles away, and had to make the journey several times before a sufficient supply was procured.

That the gentle susceptibilities of white folk may not be unnecessarily aroused by the fact that the native women were "rounded up" to fetch water, it may be said that the work in this country is done by the women of the native villages, while the men loaf—sad yet true.

Onward and upward to the top of the plateau the struggle continued, day and night, the noise of our engines rudely disturbing the slumbers of herds of elephants and other denizens of the bush, and driving them from their lairs.

BOATS HAULED UPHILL WITH CABLES, A DANGEROUS METHOD

So steep were some of the slopes that "double banking" had to be resorted to. That is to say, owing to one tractor's being incapable of hauling its load of one boat, the two engines were hitched to one boat. Afterwards both would return to bring up the second boat.

Another method used, when the road was too steep and soft for the tractor's wheels to get a grip, was by "cabling." The engine would leave its load at the foot of the hill and climb to the top, where a hole would be dug large enough to take the tractor. One end of a wire

TRACTION ENGINE AND BOAT CROSSING A RIVER

In the race through the jungle against the coming equatorial downpours, much time was lost at river fords. Many of them were not strong enough to sustain a heavy weight, and either gave way altogether or embedded the wheels of the traction engine in their earthwork and timber. Haste was imperative, for the African rainy season lasts for weeks, sweeps away bridges and fords, and turns lower levels into enormous tracts of lake land. Note the tarpaulin covers used in an unsuccessful effort to prevent the boats from warping under the equatorial sun (see text, page 345).

BRINGING UP WATER FOR THE TRACTION ENGINES

The lack of water was the expedition's most serious handicap, the men frequently sacrificing their drinking and washing supply for the thirsty boilers. On one occasion native women were rounded up to fetch a supply from a water-hole eight miles away. They carried it in heavy jars on their heads and thought nothing of making the trip several times. This being a form of "housework," the native men refused to help.

LOWERING ONE OF THE BOATS DOWN A STEEP GRADE

The downward trek from the 6,400-foot plateau provided plenty of work. One end of a wire hawser was attached to the boat to be lowered, the other to the traction engine. Extreme care had to be exercised as the boats went over the bank, for a broken hawser meant destruction to the boat. (The traction engine, at one end of the hawser, was out of range of the camera.)

hawser would then be fastened to the boat carriage at the foot of the hill, the other end being fastened to the drum on the traction engine. The drum would be made to revolve, thereby drawing the boat to the top of the slope, the tractor remaining stationary and the hawser coiling on the drum.

This method was, of course, fraught with risk, as the snapping of a hawser would mean destruction to the boats.

FORTY-TWO TREK OXEN REPLACE TRACTION ENGINES

When we neared the top of the plateau the nature of the formation of the road made cabling and double banking impossible; cabling, because of the turns in the route, and double banking, because the road was too narrow for the engine to return.

Trek oxen and a block and tackle were therefore brought into use. We had three "span," 42 animals in all (14 to a "span"). Oxen are, of necessity, slow, but of paramount value in pulling great burdens on straight roads, and we got over the turns by the following method:

A stout tree was selected about 20 yards ahead of the spot where the boat stood on its carriage in the trail. A block and tackle—that is, a pulley block with rollers, such as is used aboard any ship—was fixed to the tree. One end of the rope was attached to the boat carriage, the other end passed through the pulley block and attached by a cross-bar to the rearmost pair of oxen. The oxen faced downhill, in the opposite direction from and parallel with the boat.

All being ready, the native drivers then began laying their long whips on the oxen. The animals strained at the rope, and slowly, bit by bit, the boat was drawn up the hill until almost level with the tree to which the block and tackle were secured. The wheels of the boat carriage were then chocked up, the block and tackle fastened to a tree farther up the hill, and the whole performance repeated.

Thus by a series of tugs and jerks, accompanied by the cracking of many whips, the gradient was negotiated. The road then becoming straighter, the block and tackle were dispensed with and the oxen actually harnessed to the boats.

BIG TREE SAVES WILD ENGINE FROM A PRECIPICE

Farther on, the road once more became sufficiently hard for the tractors, and after some heavy work we reached the top of the plateau, 6,400 feet above sea-level, on September 8, 1915.

This, however, did not mean that our difficulties were at an end. The downward trek from the plateau provided plenty of hard work and many thrills, a great deal of cabling being done in easing the boats down steep slopes. On one occasion a traction engine got out of control going down a hill, fortunately running into a huge tree, which prevented it from going over an almost perpendicular bluff several hundred feet high. Again one of the boats slewed across a bridge and stopped only a few feet from the edge, narrowly escaping a fall into the river beneath.

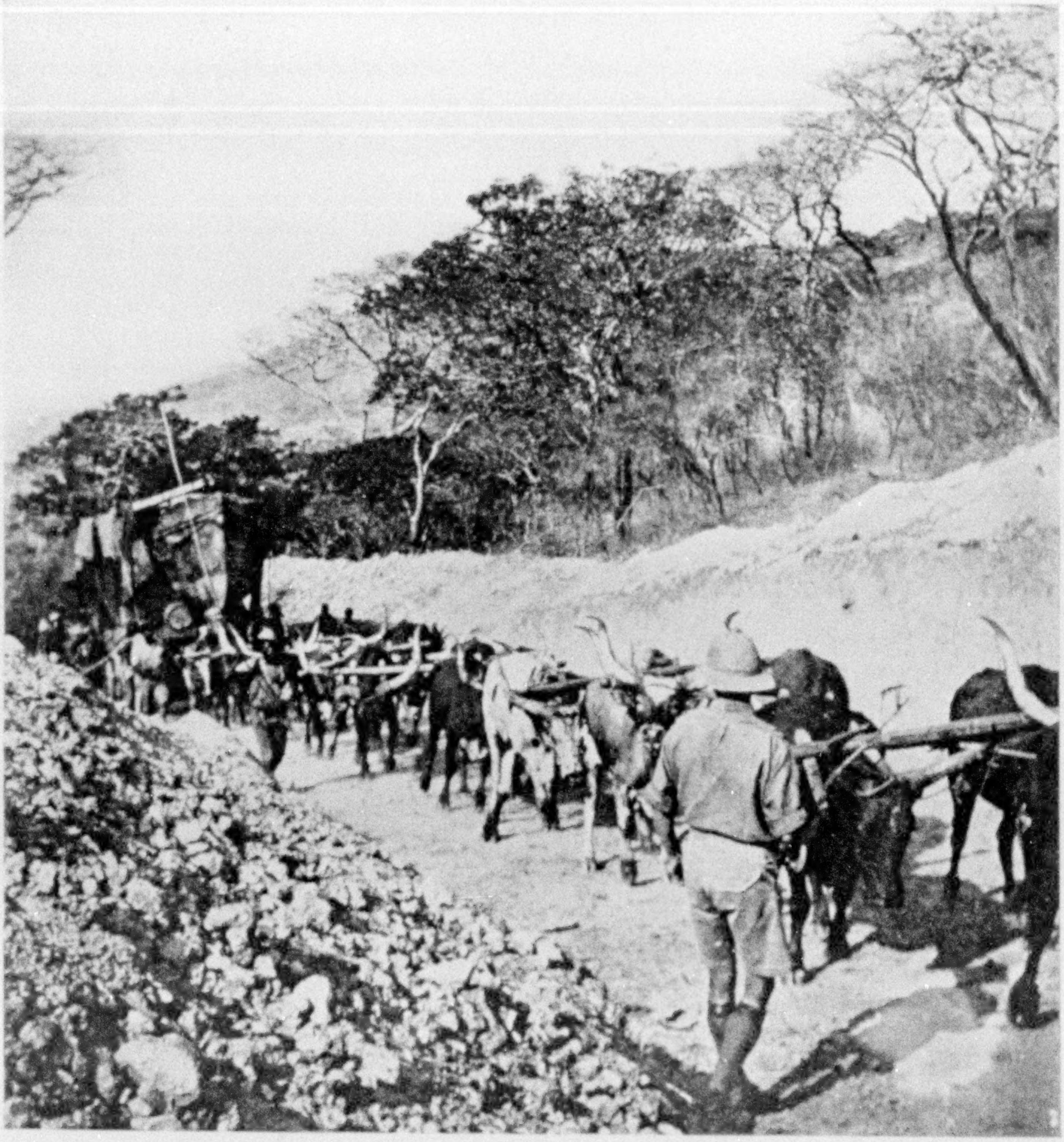
Bush fires annoyed us a good deal, and we frequently had to make a hurried shift to avoid being burnt out.

Progress now became painfully slow, indeed. Some days we hardly covered a mile, although traveling from 5 o'clock in the morning, through the heat of the day, until 9 o'clock in the evening. The king of the bush, the African lion, showed his resentment of our intrusion upon his domain by long, loud roars during the night, but the glare from the campfire held him at a safe distance.

NATIVE VILLAGES WIPED OUT BY SLEEPING SICKNESS

A part of our route lay through the areas infested by the tsetse-fly, the carrier of the dread African scourge, sleeping sickness. From time to time we passed through deserted native villages, the inhabitants of which had long been wiped out by this ravaging disease.

Although all of us were badly bitten by tsetse-flies, none suffered any ill consequences, except by the discomfort and pain caused by the bite. It is like the prick of a red-hot needle. The flies can bite through clothing quite easily, and actually have to be knocked off, it being impossible to shake them clear.



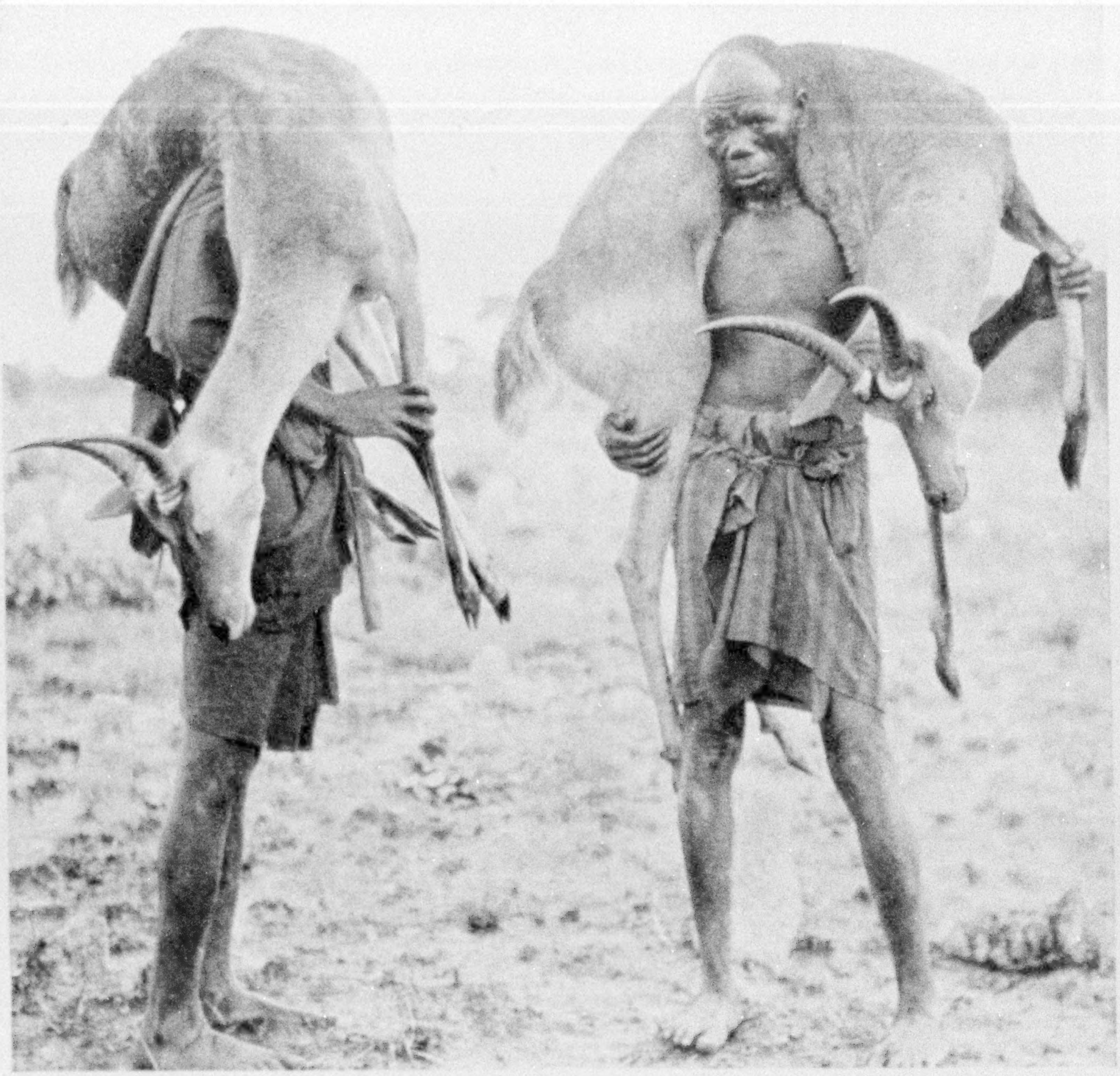
OXEN HAULING THE BOATS TO THE TOP OF A HILL

The expedition's 42 oxen were useless in pulling a heavy burden except on a straight road. Even then it was a laborious process, with much cracking of long whips by the natives and straining and puffing of the animals.

As far as possible every precaution was taken to ensure a good bill of health. Water was always boiled and filtered, and each of us took a good dose of quinine each evening to stave off malarial fever. Light khaki clothing and tropical sun helmets were worn by all white men.

The doctor had a far busier time treating natives and their children than attending to members of the expedition. When they heard of the "Great Medicine Chief," the natives flocked from their villages, bringing their sick and lame with them. But the doctor could attend to only a few, as his supply of hospital requisites was limited.

I will not go into any more details of that memorable bush trek. After long days of toil and many qualms as to whether our destination would ever be attained, we eventually reached Sankisia, a railway depot about 18 miles from the river Lualaba, on September 28, 1915,



NATIVE BOYS BRINGING IN BUCKS FOR DINNER

It is a simple matter to step out into the teeming jungles or prairies of Africa and obtain an unlimited supply of game for food. The ordinary diet of the native consists of a manioc or cassava flour made into a paste, and a meat stew concocted of everything, from ants and grasshoppers up to man. Indeed, "food that once talked" is a special delicacy, though indulged in but secretly and rarely nowadays.

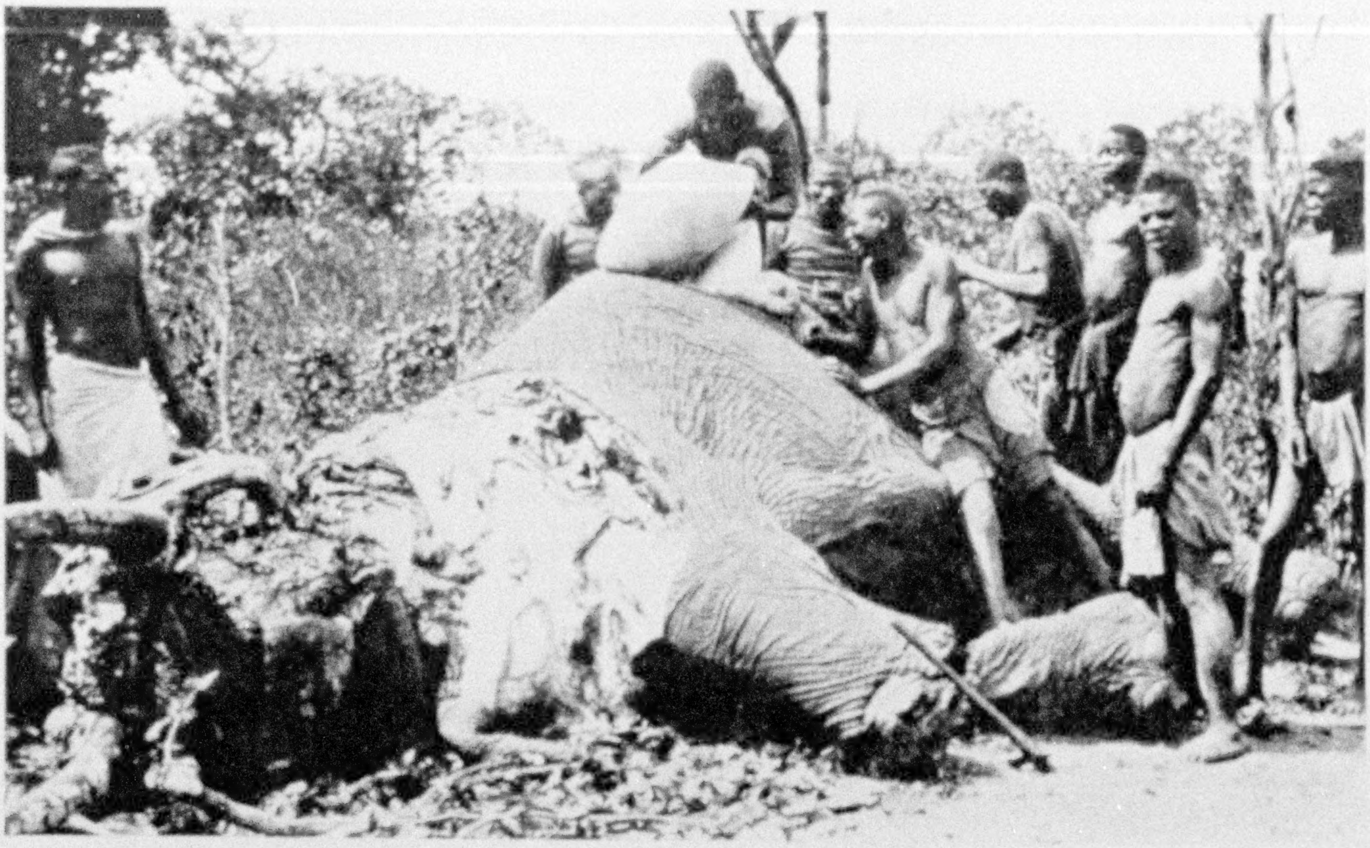
having taken approximately six weeks to cover the bush journey of 146 miles. [The railroad from Chilongo to Sankisia, shown on the accompanying Map of Africa, had not been completed when this expedition was undertaken.]

BOATS LAUNCHED BY HAND FOR 350-MILE RIVER TRIP

Needless to say, all of us breathed a prayer of thankfulness and relief, but realized we still had many miles to cover before reaching Tanganyika. Three or four days were spent here in transferring the boats to the train for the 18-mile run to the river at Bukama, which we reached without further adventure.

At Bukama a camp was established while the work of launching the *Mimi* and *Tou-Tou* went ahead. They were simply man-handled, no cranes or hoists being available. Iron rails were laid from the trucks to the riverside, down which the boats were gradually lowered broadside in their cradles into the river. The cradles were then knocked away and the boats floated clear.

It was now found that, owing to the

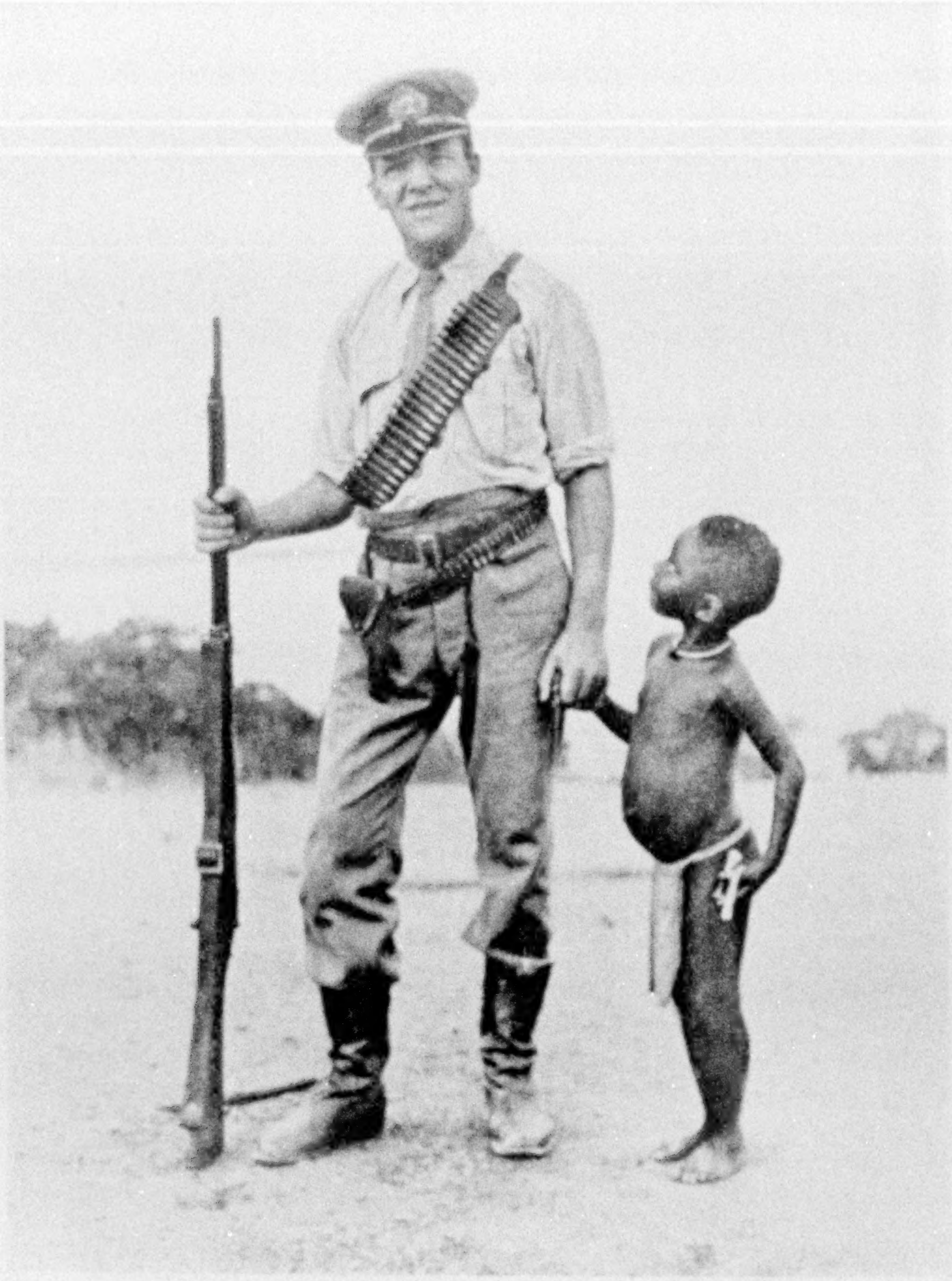


BUTCHERING AN ELEPHANT FOR A NATIVE FEAST

The native method of elephant-hunting is to drive the beast into a huge pit, especially dug and covered with branches and grass, where it is killed with spear thrusts or poisoned arrows. As fast as a section of the hide is stripped, it is rubbed with salt and rolled up.

TOMMY ATKINS TAKES HIS TEA IN THE HEART OF THE JUNGLE

When the inland villagers overcame their consternation at the sight of two traction monsters belching forth fire and smoke, they became very friendly and brought the expedition offerings of fruit, vegetables, chickens, and goats. The white dress of the African tea-pourer is indicative of the influence of a mission station.



THE AUTHOR WITH THE EXPEDITION'S MASCOT

When this African pickaninny grows up, he will be decorated with large raised scars on his back and chest to show to what tribe he belongs.

intense heat encountered throughout the bush journey, the wood had warped and seams had opened in part, although the boats had been covered with canvas tarpaulins. This necessitated taking out the engines, caulking the seams, and submerging the boats, which then resumed their normal seaworthy condition. Our stores and camp kits were transferred to a fleet of large native canoes, carved from huge tree trunks and propelled by native paddlers.

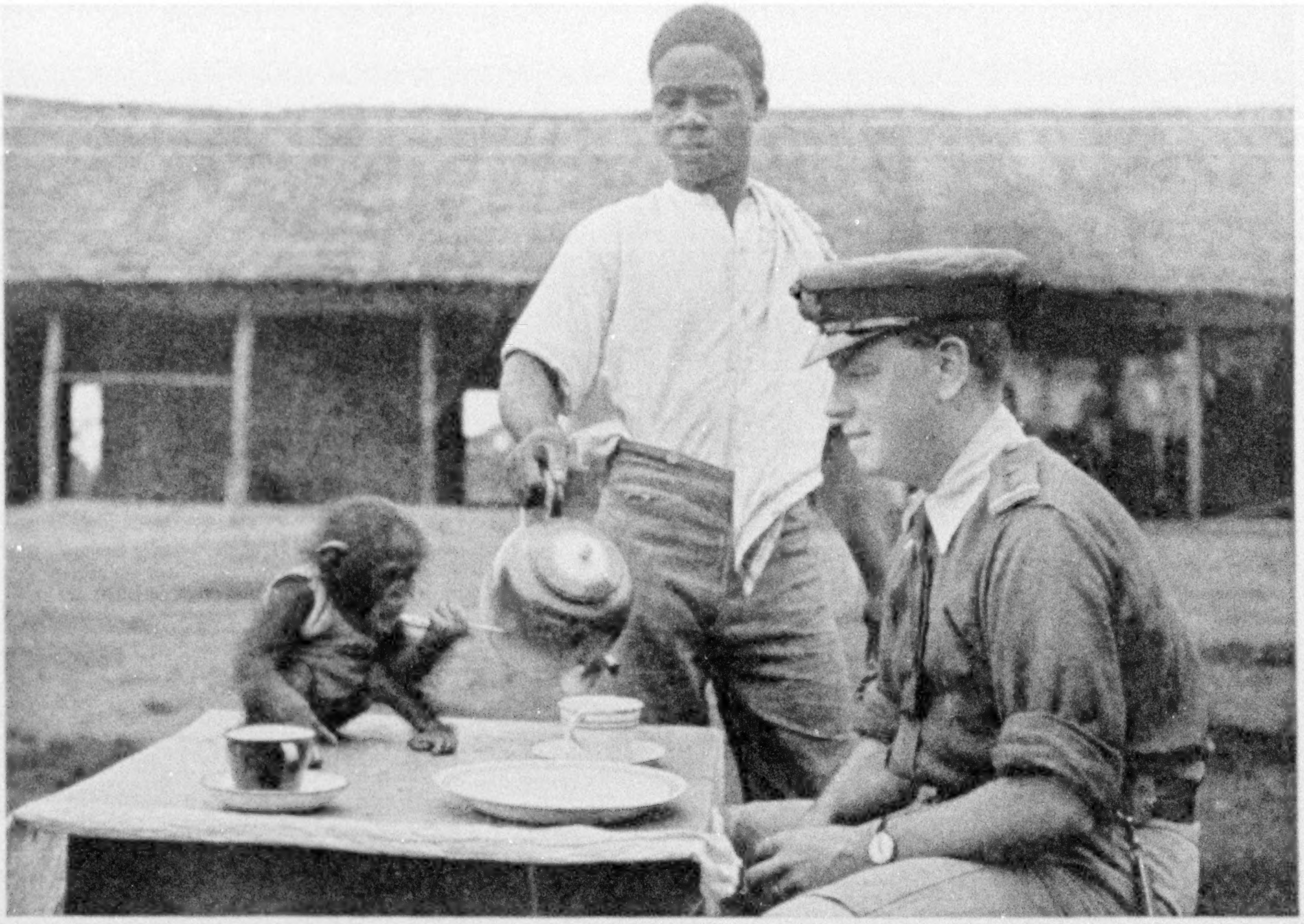
As the river had not been charted for some years, it was not considered wise by the commander to allow the *Mimi* and *Tou-Tou* to proceed under their own power, more especially as this was the end of the dry season. There was very little depth in some places in the river, and there was always danger of running upon hidden rocks or sand banks. To minimize this risk and to increase the buoyancy of the boats, large iron petrol drums were fixed to the keel of each boat.

TRIALS OF NAVIGATION ON A CENTRAL AFRICAN RIVER

All being in readiness, finally we started off on our 350-mile voyage down the river, every one looking forward to a much-needed and welcome rest after our exertions ashore. But our hopes received rather a sudden shock. Within a few hours after starting, both the *Mimi* and *Tou-Tou* ran up hard and fast on a sand bank.

Fortunately, both boats being towed by a flat-bottomed barge paddled by natives, and therefore traveling at reduced speed, no damage was sustained, but the accident caused considerable delay. All portable gear had to be transferred from the leading boat to the rear one. This considerably lightened the forward boat and, with the aid of the native paddlers, who got into the water and heaved with all their strength, we managed to shift it inch by inch until it floated free.

All gear was placed aboard the floating boat and the second one treated in a similar manner. This same trouble happened constantly—no less than eight times in one day, I recall—until we struck deeper water.



JOSEPHINE BREAKFASTING WITH AN OFFICER

This baby chimpanzee was the pet of the expedition. She was quite tame, and romped with the camp's chickens, dogs, goats, and a kitten. She liked to eat with a spoon and cried like a baby if left alone.

This "pleasant voyage" was a grueling business. We were baked alive during the day, and tormented at night by all the flying pests of the Congo—mosquitoes, flying beetles, flying ants, and their innumerable relatives. We camped ashore every night and always made an effort to get our evening meal over before darkness set in, for the candles attracted such hordes of flying things that eating was impossible. A plate of soup, a few minutes after being placed on the table, became a seething mass of floundering insect life.

Farther down the river we encountered deeper water and under such conditions managed to cover 20 miles in a day.

We proceeded under the power of native crews, who swung their long paddles to a chant which, although pleasing to the ear for a while, became extremely monotonous after a few days, because the melody never varied. The native paddler who can paddle without chanting has yet to be found; it seems part and parcel of his business.

Luxuriant trees, high grass, waving ferns, and stately palms fringed the river banks for miles at a stretch, breaking occasionally to reveal acres and acres of rolling prairie, the feeding ground for herds of eland, roan, and numerous varieties of buck. Here, also, were to be found elephants, rhinoceroses, lions, and buffaloes in large numbers; they would stand and watch us curiously as we passed, scattering and disappearing as soon as a shot was fired.

CURIOUS RIVER CITIZENS

Stretches of the river were simply alive with crocodiles—enormous creatures, most of them. Some lay along the shore, on the hot sand, sunning themselves, while others floated lazily near the surface, their ugly snouts showing just a few inches above the water. They were difficult targets for our rifles, but

we accounted for a good number; in fact, we got tired of shooting them, unless they were wanted as meat for our natives.

We came across hippopotami, too, in large numbers. They offer good targets, but can become exceedingly dangerous, with their playful way of suddenly rising under one's canoe and crushing it with their powerful jaws.

On October 11 the expedition reached Lake Kisali, the home of thousands of birds of different species, including marabou, fish-eagles, spur-winged geese, and many other varieties.

Kadja, a Belgian post, was reached the following day. Here the commander was informed that the river ahead was particularly rocky and difficult of navigation. It was therefore decided to put the *Mimi* and *Tou-Tou* aboard a flat-bottomed river steamer placed at our disposal by the Belgians. This task occupied several days, and we left Kadja on October 16.

A LATTER-DAY FAD INVADES THE AFRICAN JUNGLE: JOSEPHINE HAVING HER HAIR BOBBED (SEE ALSO ILLUSTRATION, PAGE 346)

More delay was caused en route by the steamer's running aground on the banks of the river, owing to sharp bends in its course. Other than this, things ran pretty smoothly, and on October 22 we came safely to the end of our cruise at Kabalo. The river journey had required 17 days.

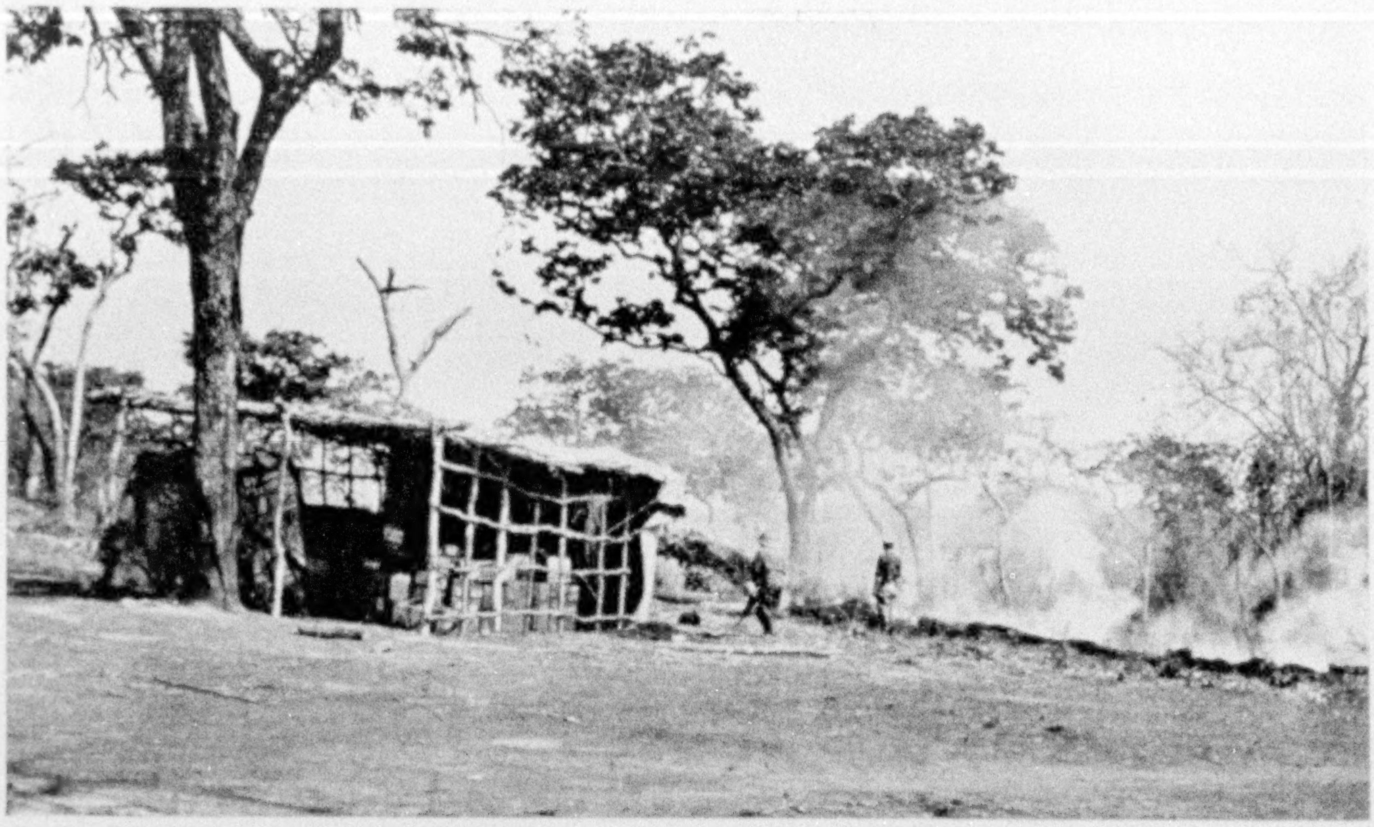
Here we lost another officer, Lieutenant Hope, who suffered from sunstroke and had to return to a healthier climate.

All that remained now was a railway journey of 200 miles to Lake Tanganyika. Needless to say, we felt extremely happy at the thought of eventually getting to our destination—a prospect which had on several occasions seemed so remote—and the 200-odd miles between us and the lake seemed but a stone's throw. The boats and all gear were entrained without mishap, and a few days later we arrived at Albertville, on Lake Tanganyika.

We were accorded a hearty reception by the Belgians, who stated they had given up all hope of our getting through. A camp was formed and grass huts erected for our accommodation.

A TROPICAL STORM ON LAKE TANGANYIKA

By this time the rains had commenced, and the first night at Tanganyika we en-

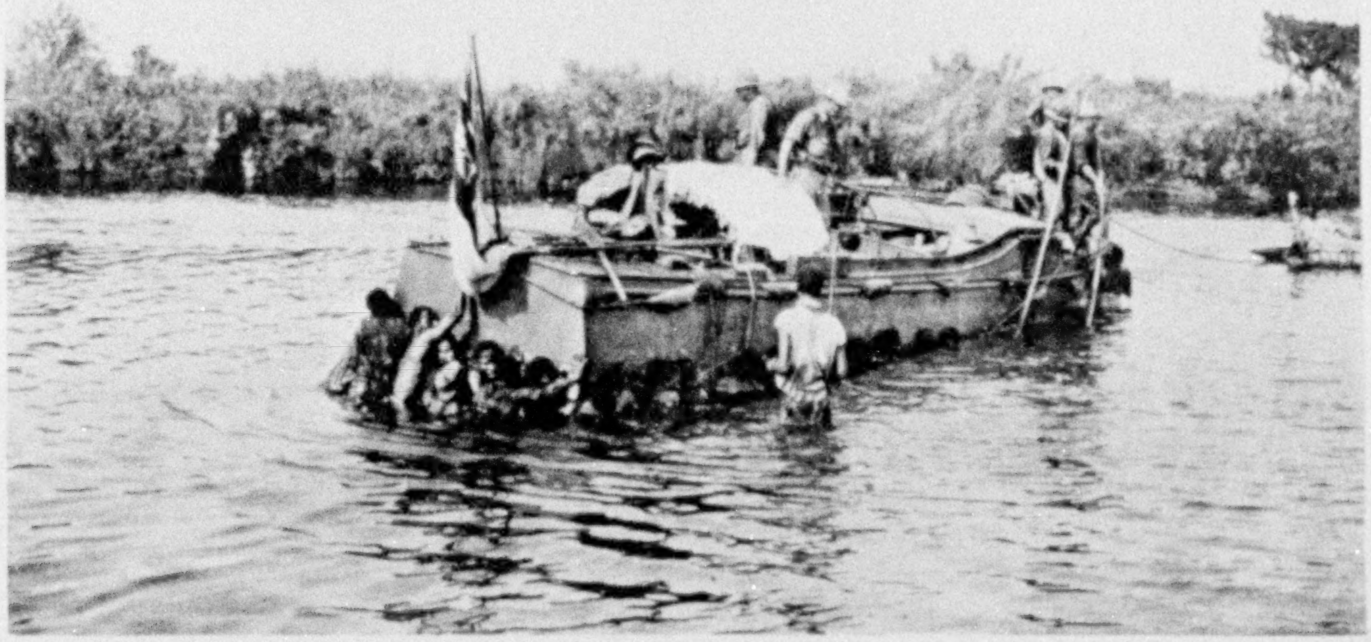


PUTTING OUT A BUSH FIRE NEAR A TEMPORARY MAGAZINE

Curiously enough, in most parts of the Congo bush fires are of rare occurrence, although the natives usually have a fire going all night to keep prowling animals from their villages, and take no special precautions to avoid conflagrations.

NATIVES CONSTRUCTING GRASS HOUSES

Many tribes of the Congo construct round or oblong huts of grass stems over a framework of forked posts. Both the walls and roof of bamboo poles are thatched with banana leaves. The interior is divided into a few rooms, and there is only one door for entrance and ventilation. It is customary to have a fire in the house continually.



AGROUND ON A SAND-BANK IN THE LUALABA RIVER

The sandy bottom and banks of this river are very fickle and sometimes shift with surprising suddenness. Daily the good-natured native paddlers of the expedition had to shift the gear in the boats and jump into the shallows to heave the craft over the sand-bars.

countered a tropical storm. It broke over our camp in a hurricane of wind accompanied by ear-splitting bursts of thunder and vivid lightning, which illuminated the country for miles. The lake itself became a raging sea, enormous breakers rolling up and crashing on the shore, uprooting trees, and demolishing native huts.

We were thankful that our boats had not been launched; and in view of the violence of the storm, the commander decided not to launch them until a harbor had been devised, there being no shelter of any description for boats.

The lake roughly is 420 miles in length and varies in width from 20 to 50 miles. It is situated 2,800 feet above sea-level and in some places bottom has not been reached at 400 fathoms.

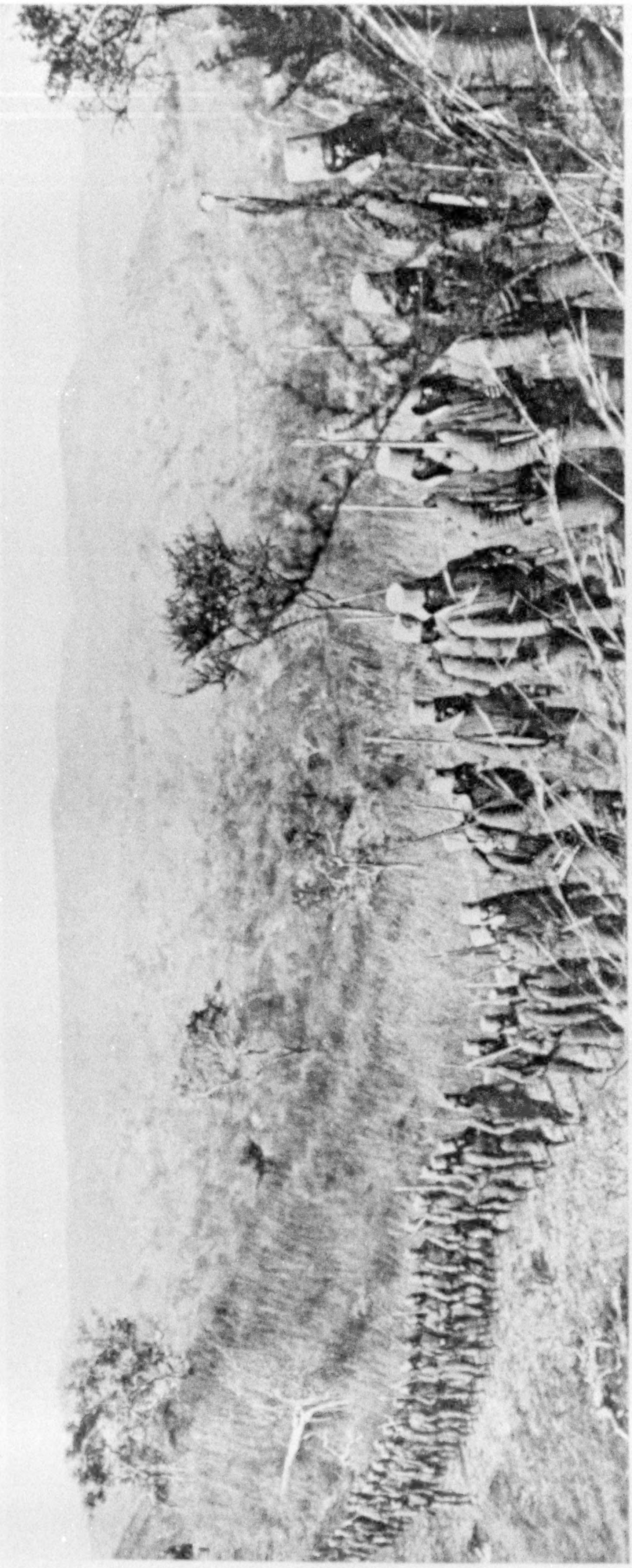
The water is not salt and can be drunk. This being a private fishery of the King of the Belgians, we were not allowed to use rod and line, but bought our fish.

The east coast, from one end of the lake to the other, was German territory, and the west coast was Belgian Congo. Our depot on the Belgian side was about half-way up, at a place almost opposite the German base known as Kigoma. The lake at this point was about 40 miles across. On a clear day the high hills on the German coast could be seen distinctly from our depot.

OBJECTIVE OF THE EXPEDITION

Perhaps mention should be made here of the real objective of our expedition. From time to time during the military operations in the vicinity of the lake, efforts had been made by British and Colonial forces to advance from either end along the German coast, the idea being to join forces at the German depot at Kigoma and drive the enemy away from the lake, back to the seacoast, and eventually out of Africa.

All such attempts had been futile, owing to the fact that at any time our troops attempted an advance along the German coast they were subjected to a bombardment from the German vessels on the lake.



ASKARIS, BELGIAN NATIVE TROOPS OF THE CONGO

The Belgian army in the Congo consists of African troops, recruited by conscription and volunteering and officered by Europeans. Its effective strength is between 15,000 and 18,000.

Well, it was to be our job to destroy the German fleet, and thus assist in making effective the activities of land forces operating against the enemy on their own coast; in fact, we were to be the key to the whole situation.

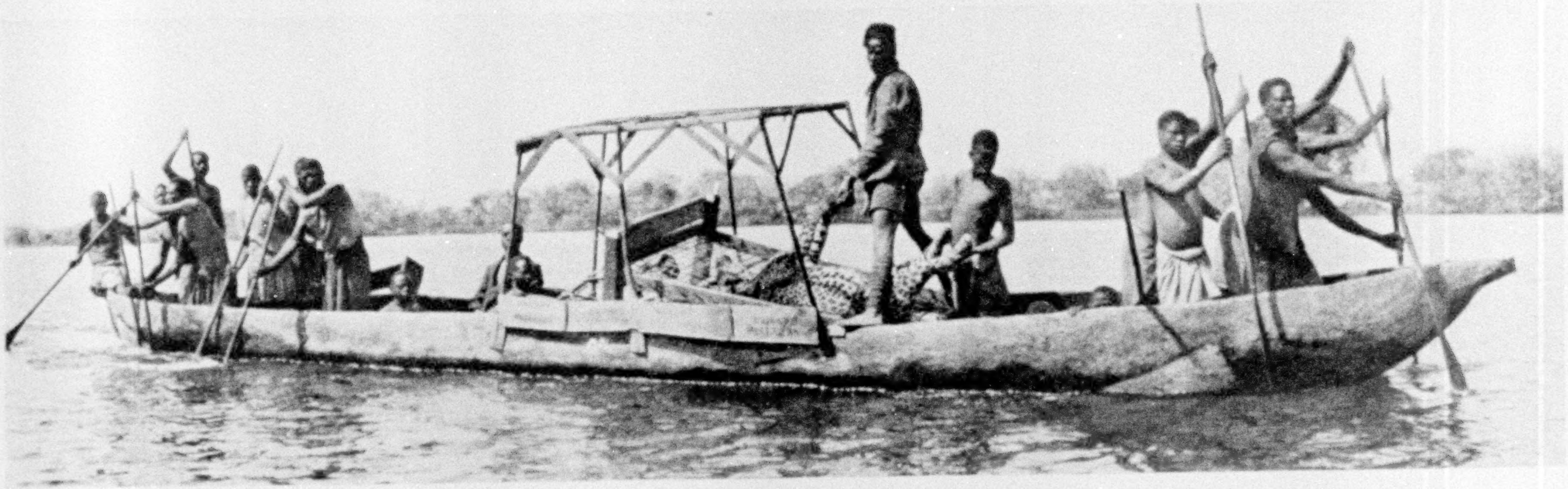
ARRANGING A BASE

But to return to the building of the harbor.

Tons of rock were blasted locally, and then taken down to the lake in trucks and dumped into the water. Gradually the rock piled up and extended out into the water, until finally a suitable breakwater and harbor were formed. This operation gave the natives the impression that we intended to build a road across the lake to the German coast, 40 miles away, and march across.

Time after time during the course of construction the breakwater was washed away by the violence of the waves, and it was not until December 23 that the boats were actually launched—nearly seven months from the date of leaving England.

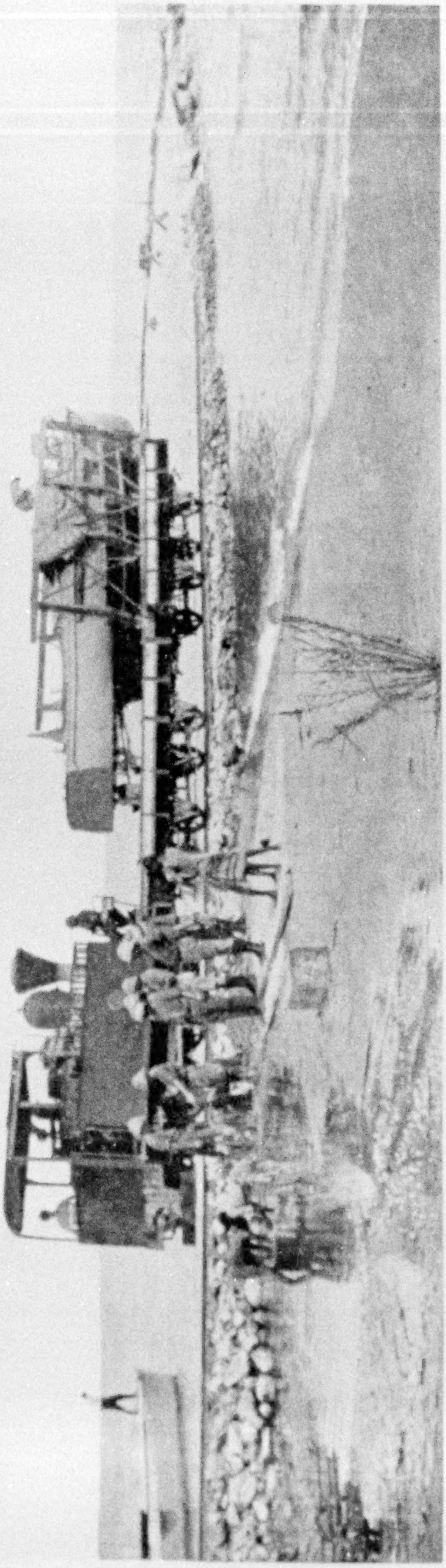
In the meantime the German vessels often came close to the Belgian coast, and on one occasion the *Kingani* came well within range of the guns of the Belgian forts. These guns had been placed in the fort only recently and the enemy



NATIVES PREPARING TO SKIN AND COOK A LEOPARD

VILLAGERS ALONG THE LUALABA RIVER WATCHING THE BOATS GO BY

This river is one of the most important tributaries of the Congo. Big game swarms in the luxuriant growth along its banks, and its waters teem with hippopotami, rhinoceroses, and crocodiles. Some parts of the river are crowded with native settlements, but in others its loneliness is weird and haunting. The Naval Africa Expedition journeyed down its waters from Bukama to the railhead at Kabalo—more than 200 miles in an air line.



LAUNCHING THE "MIMI" INTO LAKE TANGANYIKA

After blasting tons of rock to construct a breakwater and harbor, the boats were lowered down an inclined track by means of a hawser attached to a railway engine. Ammunition, guns, and provisions were then taken aboard and the expedition was ready for the fray.

were surprised to find themselves under fire. The *Kingani*, however, by clever maneuvering, managed to get away undamaged.

The launching of our boats was effected by lowering them down an inclined track into the water by means of a hawser attached to a railway engine. A three-pounder gun was then fixed forward on each boat and a machine-gun aft. Provisions and a supply of ammunition were stowed aboard, and on Christmas Eve, 1915, we were ready for the attack. We sat down, rather glad of a breathing spell, practically the first since we had started our trip, and waited for the enemy to leave their harbor.

We kept Christmas in the good old-fashioned style—at least as well as possible under a tropical sun—and each one of us gave a thought to the folks at home.

I tried to get an expression from my native servant as to what Christmas conveyed to the African mind, wondering if he were aware of its origin and meaning. He thought for a long time, and at last informed me that Christmas meant "All white boss drink plenty whisky!"

ENEMY BOAT SURRENDERS

Our festivities were soon cut short.

On Sunday, December 26, 1915, the hands being mustered for divine service at 9:15 a. m., a message was received

SECURING BOATS TORN FROM THEIR MOORINGS AFTER A STORM ON LAKE TANGANYIKA

Lake Tanganyika is subject to violent tropical storms, accompanied by impressive cloud, thunder, and lightning effects. The lake becomes a furious churning sea, dashing immense breakers far up the banks of its wood-fringed heights. Tanganyika is the longest fresh-water lake in the world—400-odd miles—and one of the most beautiful. Ujiji, on its eastern shore, is the memorable spot where Stanley found Livingstone. The lake was first visited by a European in 1858.

NATIVE TROOPS OF THE BELGIAN ARMY CUTTING ENEMY LINES OF COMMUNICATION

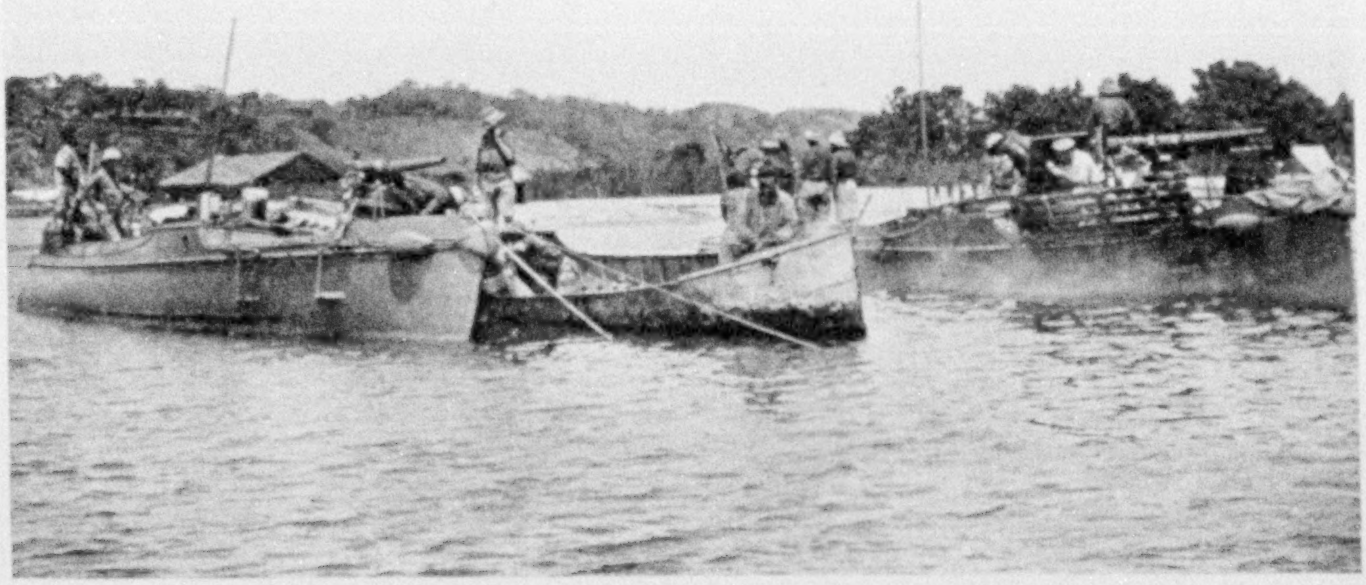
The Askari is a daring and efficient fighter. Most of the soldiers are recruited from the Bangala, the most intelligent of the Congo tribes.

from Toa, about 20 miles up the coast, reporting that an enemy vessel was sighted coming southward. Prayers were finished and the men ordered to get into fighting rig (khaki shirts and shorts) and to stand by their boats.

At 11 the boats left harbor, accompanied by the two Belgian boats, *Netta* and *Tenton,* which were ordered to stand by to pick up the crews of the *Mimi* and *Tou-Tou* should they be struck, as one shell hit would have been sufficient to sink either boat.

At 11:40 the German gunboat *Kingani* (this being the vessel reported) was well in Tembwe Bay, to the right of our depot, and apparently had stopped; but evidently sighting our boats suddenly, the presence of which on the lake the enemy had so far been unaware of, the *Kingani* turned to the eastward and made off at full speed.

The British boats gave chase, and at 11:47, when within a 2,000-yard range, opened fire with common shell. The enemy immediately returned the fire, aiming at the *Mimi,* which, however, drew

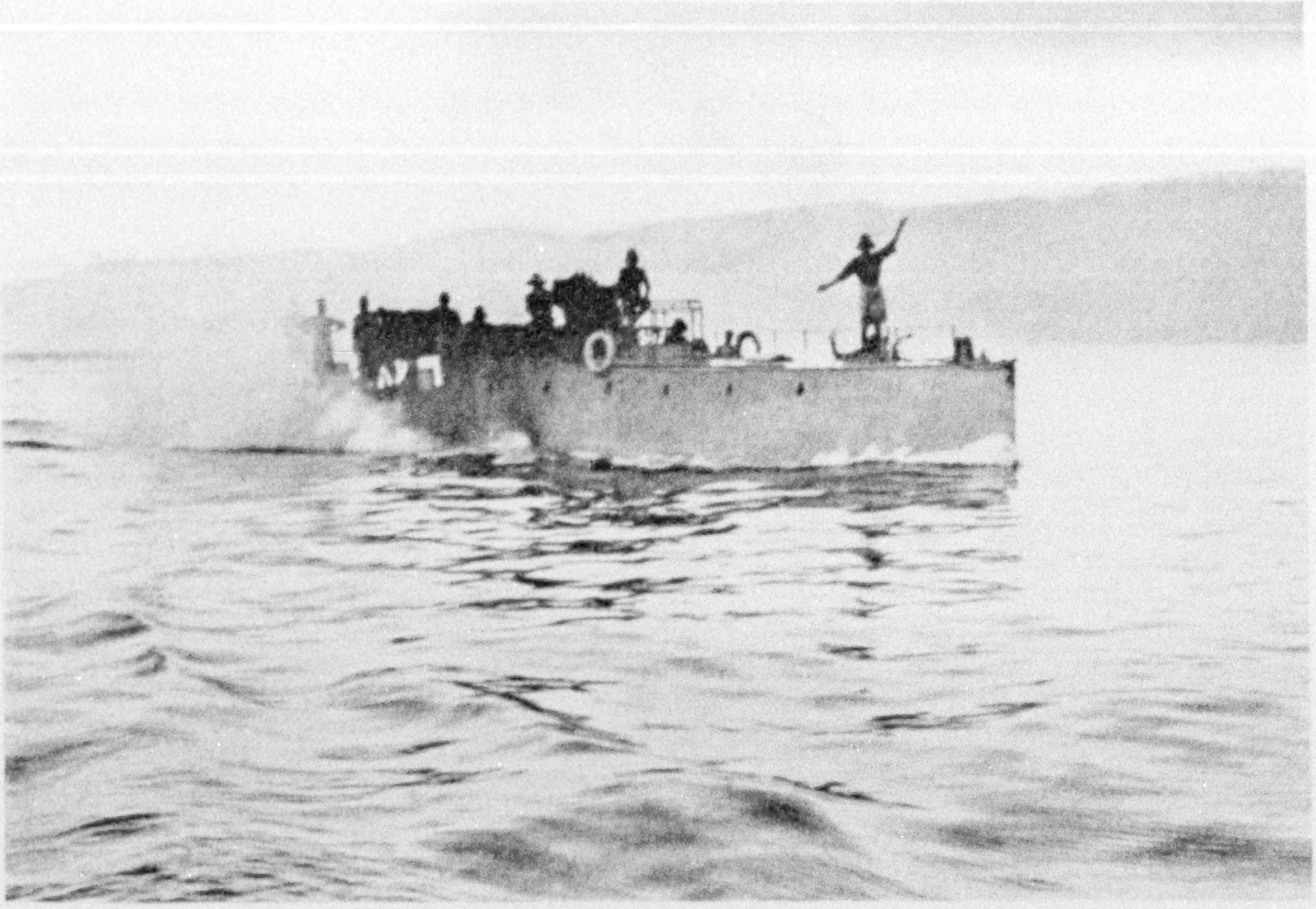


THE "MIMI" AND "TOU-TOU" STRIP FOR ACTION

The first naval engagement and British victory on Lake Tanganyika took place on December 26, 1915, and lasted ten minutes. The banks were lined for miles with excited natives, who left their inland villages and flocked to the coast to see a sight forever memorable in their lives. After the victory, they rushed to greet the commander, and trickled sand into their hair as a sign of respectful submission (see text, page 358).

THE FUNERAL OF THE ENEMY DEAD AFTER THE FIRST BRITISH VICTORY ON THE LAKE

The bodies from the *Kingani* were wrapped in canvas and buried by the British with full naval honors. Picked troops were put on guard over the graves for some time afterwards, lest some of the native soldiers should revert to cannibalism. There were no British casualties.



THE NATIVES MISTOOK SEMAPHORE SIGNALING FOR THE WHITE MAN'S PRAYER TO HIS GOD

"The news went through all the native villages that the Great White Chief had been seen making signs to his Ju-Ju (God), calling upon him to deliver another German ship into his hands." The second British victory convinced the natives that the white man had not prayed to his god in vain, and thus British prestige was greatly enhanced (see text, page 361).

astern until the enemy's guns could no longer bear.

The enemy then opened fire on the *Tou-Tou*, and although shells fell very close, none scored a hit. Again the *Mimi* maneuvered into position for attack, and after an engagement lasting ten minutes, during which time our gunner scored about 25 hits with high-explosive shells, the enemy hauled down his flag and surrendered.

ENEMY'S COMMANDER KILLED EARLY IN THE FIGHT

Through information gleaned from the survivors of the German crew, it appears that early in the engagement a high-explosive shell pierced the armored screen around the *Kingani's* gun and hit the German commanding officer, blowing the lower part of his body away. The same shell killed a petty officer. A second shell also pierced the screen and killed a warrant officer. A third hit the engine-room skylight and two native seamen and a native stoker either were blown or jumped overboard.

There remained but one European seaman, who was at the wheel; but this man was so dazed that he scarcely knew what he was doing. He continued to steer toward the German coast, until a chief engine-room artificer took command. Seeing that escape was hopeless, he hauled down his flag and stopped the engines.

Several attempts were made to board the prize, but were given up, owing to the roughness of the sea; not, however, before the *Mimi* had been damaged in collision and sprung a leak.

As the *Kingani* had been holed near the water-line on the port side abreast of the boiler and was in danger of sinking, Commander Spicer Simson ordered her to steer for our harbor. She was escorted on each side at half a cable's length by the British boats. On arriving in harbor, the prize was gently grounded, but sank

WHEN THEIR FIRST AËROPLANE WAS SIGHTED

Spell-bound, gazing upward with arms extended, eyes bulging, and mouth agape, the panic-stricken natives first believed the aëroplane a new kind of bird monster swooping down from the sky to destroy them. But when their fear was overcome, they clustered around the machine and referred to the pilot as "the Great White Chief from Heaven" (see text, page 359).

with a heavy list to starboard shortly afterwards. There were no casualties on our side, but the boats were much shaken by their own gunfire.

In the meantime great excitement prevailed on shore, where the action had been witnessed not only by the whole of the Belgian naval and military personnel, but also by thousands of excited natives.

These people had flocked to the coast from inland villages to watch a spectacle they had never seen before and are never likely to see again—a naval engagement. They covered every hill-top and crest along the coast, and when it became known that the German ship had been captured, their excitement knew no bounds.

NATIVES OVERJOYED AT VICTORY

They came bounding down from the trees and hill-tops, giving vent to loud whoops of delight and gesticulating wildly, simply falling over each other in their hurry to reach the beach in order to pay their homage to the new Great White Chief, our commander. There they assembled in thousands, arrayed in their brightest pigments and gaudiest loincloths, a jigging, jogging, frenzied mass of black humanity—a sight not to be forgotten.

The Belgians also expressed their joy in the usual demonstrative Continental fashion of embracing and kissing each other and by the singing of their national anthem. The members of the naval expedition whose duties kept them ashore were also embraced and kissed, which I rather think gave some of them reason to reflect that even victory has its disadvantages (this with all due respect to the bearded donors of the kisses).

When our commander stepped ashore, he was met by a guard of honor and overwhelmed with the congratulations of the Belgian officers. A band of native buglers greeted him with a musical fanfare, weird and wonderful, and the guns from a shore battery thundered out their salutations.

CANOES USED ON THE TRIP BACK TO CIVILIZATION

A part of the return journey of the expedition was made 600 miles down a tributary of the Luapula River in dugout canoes paddled by native experts. The logs are hollowed out by fire and primitive tools, cleverly shaped, and scraped down to an inch in thickness. Playful hippopotami and rhinoceroses frequently overturn canoes by rising up under them or lunging at them from the banks.

The natives, with grunts of satisfaction and approval, threw themselves flat on the ground and trickled sand into their hair—a sign of respectful homage—as the commander passed among them. The native women flocked around, in an effort merely to be seen by him, regarding this as a fetish which would protect them from evil spirits.

In the meantime the prisoners had been brought ashore, some hostility on the part of the Belgian natives being promptly quelled by the armed guards.

GERMANS KILLED IN ACTION BURIED BY BRITISH WITH FULL NAVAL HONORS

Later the remains of the Germans killed in action were brought ashore, wrapped in canvas, ready for burial. The interment, attended by both British and Belgian contingents, took place during the afternoon. Commander Spicer Simson officiated and full naval honors were accorded. A native bugle band, which had a few hours previously welcomed the commander ashore, played the last post, and a salute, fired by a party of 50 native soldiers, concluded the ceremony.

A gruesome incident in connection with the burial of the Germans is that a number of specially chosen native troops were put on guard over the graves for some time, day and night. The significance of this lies in the fact that a large majority of the Belgian native troops are recruited from tribes addicted to cannibalism and some of them might have felt tempted to take the opportunity of indulging in their horrible custom if precautions had not been taken to prevent it.

The victory was celebrated at nightfall in the Belgian and British camps and toasts were freely exchanged.

The natives also celebrated until early in the morning, performing wild native dances around huge bonfires to the beating of many tom-toms.

Shortly after the news had been wirelessed to the Admiralty in London the

following message was received by Commander Spicer Simson from Buckingham Palace:

> "His Majesty the King desires to express his appreciation of the wonderful work carried out by his most remote expedition."

"KINGANI" IS RAISED AND REFITTED

The *Kingani* was quite an asset, being much larger than either of the British boats, and therefore capable of carrying a larger gun. No time was lost in raising her and getting her thoroughly overhauled and repaired. A 12-pounder gun was dismounted from one of the shore forts and mounted aboard the captured German vessel.

To our knowledge, the Germans still had two vessels to be accounted for—the *Hedwig von Wissmann* and *Graf von Gotson*. Both were larger than the *Kingani* and carried more guns of a larger type. In addition to this, the Germans had a number of small armed dhows.

During the time the *Kingani* was being made seaworthy, the other German boats appeared from time to time on the horizon. Possibly they were searching the lake for the missing *Kingani*, but they always kept well off shore.

Apparently the fact that the *Mimi* and *Tou-Tou* had reached the lake was still unknown to the Germans, according to a statement made by the survivors of the *Kingani*. They had been astonished when pursued by our boats, and informed us that the German authorities on the other side were in entire ignorance regarding our arrival.

The excitement now died down, more or less, barring an occasional night alarm, which meant turning out; but this was no great hardship, as the persistent attentions of myriads of insects of all sizes and varieties usually made us glad to get up from bed to have a rest!

During this period of waiting the members of the expedition took the opportunity to indulge in hunting for elephant, lion, leopard, buffalo, and numerous species of buck, which abounded not far inland. Lions and leopards were particularly troublesome and daring, often penetrating our camp after dark and considerably depleting the numbers of our goats, cattle, and poultry.

Before our second engagement on the lake, an incident occurred which illustrates the superstition of the natives and which will show how British prestige was much enhanced in this part of the country.

Our commander had occasion to take a trip down the lake to Mpala, a Belgian post, and as he approached he stood up and semaphored a message with his arms to the effect that he was coming ashore. Semaphore signaling being unknown to the natives, they put their own interpretation on it, and the news went through all the native villages that the Great White Chief had been seen making signs to his Ju-Ju (God) in the sky, calling upon him to deliver another enemy ship into his hands.

OUR COMMANDER BECOMES A JU-JU TO THE NATIVES

This happened two days before the commander was successful in sinking the *Hedwig von Wissmann*, which convinced the natives that the Great White Chief had not prayed to his Ju-Ju in vain. They were so impressed that they molded images of the commander in clay (and good likenesses, too) which they worshiped in their villages as their new Ju-Ju. This was very well for Commander Spicer Simson, but it must have proved rather disconcerting to the Belgian White Fathers (a religious order) of the native mission—who had spent years and years in an effort to open the native mind to Christian teachings—to find their black flock suddenly turning to a new Ju-Ju in the form of a British naval commander in clay!

SEAPLANES CREATE WILD PANIC AMONG NATIVES

Up to the time of the arrival of the British motor-boats and traction engines, the only method of propulsion known to the natives was the paddling of their canoes. The traction engines especially were a great source of wonder to them. Imagine, then, the effect on these people of seaplanes soaring in the air above their villages!

It was simply amazing. Four "Short" seaplanes had been sent out and arrived

A FLEET OF RIVER CANOES AND THEIR STALWART CREWS (SEE ALSO PAGE 358)

NATIVE CARRIERS IN THE SWAMPS OF LAKE BANGWEULU, THROUGH WHICH THE NAVAL EXPEDITION PASSED ON ITS RETURN JOURNEY

immediately after the capture of the *Kingani*. They came packed in crates and were assembled at a Belgian post some 25 miles down the coast from the depot.

At about the same time, two portable wireless field sets carried on stout wagons arrived at our base. The wireless sets, with their tall steel masts, were erected in the British camp for experimental tests, much to the mystification of the natives, who, on being told that messages were being collected from the air, dubbed the operators "the White Chiefs who talk to Big Ju-Ju."

WIRELESS COMMUNICATION TERRIFIES NATIVES

It so happened that at about the time the Marconi operators made a test of their apparatus the Belgian airmen down the coast, having fixed up one of their seaplanes, decided to make a trial flight. Picture, therefore, the amazement of the superstitious negroes when, shortly after the wireless had begun sending test messages, with the rasping, crackling of electric sparks, lo and behold came the answer to their prayers to Heaven, as the natives thought, in the form of a low droning, gradually getting louder!

Suddenly the seaplane shot into view out of the clouds, describing circles and going through sundry evolutions over the camp. The natives stood spell-bound, gazing upward with arms extended, eyes bulging, and mouths agape.

The airman then made a sudden dive downward and that broke the spell. The savages bounded off into the bush, terror lending wings to their progress. Mothers snatched up their pickaninnies and dived for the shelter of their kraals, shrieking at the top of their voices. It was real pandemonium.

Hours later, after the seaplane had settled on the lake, the natives returned, but were visibly agitated by what they had seen. They were reluctant to approach the machine for some time, but finally, coming to the conclusion it was not a monster bird bent on destroying them, they clustered round and referred to the airman as "the Great White Chief from Heaven."

We come now to the sinking of the gunboat *Hedwig von Wissmann* by the *Mimi* and *Tou-Tou* and *Kingani*, the last named now in fighting trim and rechristened *Fifi*.

THE DESTRUCTION OF THE SECOND GERMAN GUNBOAT

At daylight on the 9th of February a message was received that a boat was in sight, steaming slowly southward. All being ready, the British flotilla started off to meet the enemy vessel, and at 8:35 a. m. she was sighted heading south-southwest at about six knots.

The enemy vessel turned immediately and attempted to escape, speeding up by putting oil on the fires.

The British flotilla were in pursuit at full speed, but until we were within 5,000 yards, the reflection caused by the glassy surface of the lake made the enemy appear like a dark blob suspended above the horizon, with a similar blob some distance below.

The *Mimi* first opened fire at 3,800 yards, making several hits in the first few minutes.

The *Fifi* opened fire from 7,500 yards, but was unable to register a hit. The range was reduced, and firing from about 5,600 yards, she scored about 40 hits out of 60 shots.

One high-explosive shell burst in the engine-room, killing the engineer and a native stoker, and also burst an oil tank. A second shell burst between the engine and boiler, killing a native stoker and wrecking the engines. A third blew a large hole in the ship's bottom and set fire to the oil, with which the engine-room was drenched.

ENEMY COMMANDER AND CREW JUMP OVERBOARD AND ARE RESCUED

The whole ship then appeared to be enveloped in flames, and Lieutenant Odebrecht, commander of the German vessel, realizing that his ship was sinking, gave orders to abandon it. Two of his three small boats were still seaworthy and were dropped astern; but just at this moment a shell passed through one boat and blew the other to pieces, killing a warrant officer and some natives and slightly wounding a European stoker and a native seaman.

The order was then given to jump overboard, and the survivors—12 Europeans, including their commander, and eight natives—were picked up by the British boats. The *Mimi* took the wounded on board and made for the harbor at full speed, so that they could have medical treatment. The enemy vessel was well alight by this time, and shortly afterward she suddenly up-ended and went down by the head. The British ships then made for harbor, where a repetition of the *Kingani* scenes took place. The prisoners were handed over to the Belgians, with the exception of the German commander, who was put on parole and was accommodated in our mess.

Due respect was paid to his rank, and he was treated with every civility by all members of the expedition. He seemed genuinely sorry when the time came for his transfer to a prison camp and thanked all for his generous and kindly treatment. He wore the Iron Cross.

A good deal of information was gleaned from the native prisoners concerning the number of boats, guns, etc., in the German harbor, and as far as we could ascertain, there were still two German boats to be brought to book, the *Wami* and *Graf von Gotson,* the latter carrying a gun far superior to any of ours in size and range. We also learned that there were some big guns mounted on the German forts ashore; but these, we found out later, were merely wooden dummies!

Then came another period of waiting, but nothing happened for some months. Our watchfulness was finally rewarded, however. Early one morning we surprised the German boat *Wami* transporting native troops down their coast. Though well out of range of our guns, the German commander realized we would overtake him before he could reach the safety of his harbor, so he beached on the German coast, landed his troops, and set fire to his ship.

It must have been apparent by this time to the German command at Kigoma that the game was up, and that their course on the lake had been run, as shortly afterwards they blew up the *Graf von Gotson* in the German harbor and destroyed all the small craft, in addition.

This was the end of German naval prestige on Lake Tanganyika—in fact, in Central Africa. The efforts of the Naval Africa Expedition had been entirely successful in destroying the enemy's power on the water, and therefore the military forces ashore were enabled to carry on their operations without hindrance.

Our little job being finished, we returned to England, having covered approximately 20,000 miles in our travels to Africa and back. This constituted a record distance for any individual expedition during the war.

With the exception of aërial transport, every known method of transportation was utilized in conveying the boats from England to Lake Tanganyika.

MANY HONORS AWARDED TO MEMBERS OF THE EXPEDITION

Commander Spicer Simson, R. N., received the Distinguished Service Order, three other officers were decorated with the Distinguished Service Cross, and the remainder were promoted. Six Distinguished Service Medals were awarded to gunners, etc.—in all, not a bad record for a party of twenty-eight. One Belgian decoration was awarded by the Belgian authorities, and that to the commander.

In conclusion, I am glad to be able to say that the expedition suffered no casualties, and that all the members on their return, after a short period of well-earned leave, were attached to other units in various spheres of hostilities; but I am sure that, whatever may have been their lot since, not one of them has dwelt on his experiences in the heart of Africa without a thrill of pride and a feeling of satisfaction at having been one of the privileged twenty-eight comprising the Naval Africa Expedition to Tanganyika.

Photograph by Horace W. Scandlin

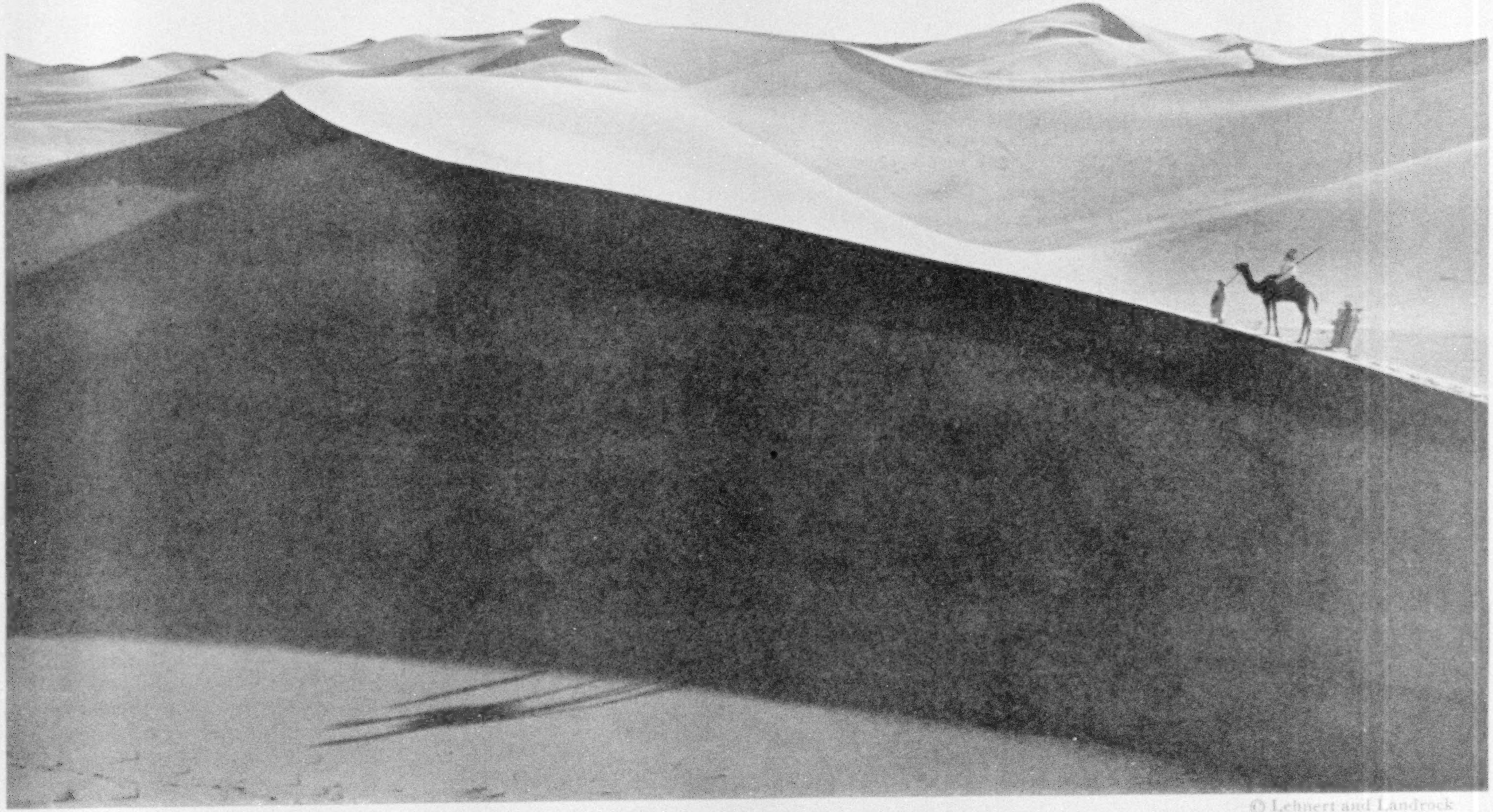
A CHRISTIAN BRIDE OF KABYLIA

Between the Sahara and the sea, from the Atlantic to the Nile, the Berber type and temperament have persisted from prehistoric times. Among the fairest of these Libyans are the Kabyles, many of whom have blue eyes, ruddy complexions, and wavy brown hair. Most of them are Moslems of the Sunnite branch, but some have become Christians.

© Donald McLeish

THE SPLENDID TERRACES OF NEW AND OLD ALGIERS

The view of Algiers from the sea is world-renowned. Along the edge of the harbor the Boulevard de la République runs for nearly a mile, raised on arches, with a double ramp near the center to give access to the quay. The modern French town occupies the level shore and the old town, with its narrow streets, thronged with Moors, Jews, Arabs, and Negroes, climbs the hills behind this modern veneer.



© Lehnert and Landrock

THE SAND SEA OF THE SAHARA AT SUNSET

Barren and treacherous, the swelling dunes of the great African desert are not without life. The roving caravans and the errant winds leave footprints to mark their passing, but these exotic touches are soon swallowed up, like the wakes of ships, in the immensity of the billowing sands.

Photograph by Otto C. Gilmore

A DATE CARAVAN IN THE HEART OF ALGERIA

Each camel carries 600 pounds of dates, and, unlike the fleet-footed racing camels, these deliberate beasts will travel only 20 to 25 miles a day. When night comes, the tiny fires are lighted, the coffee and pipes are prepared, and the shouts of noonday give place to the characteristic low-voiced conversation of the desert camp. Because of the terrific heat, caravans keep on the move all day when away from oases.

Photograph by Otto C. Gilmore

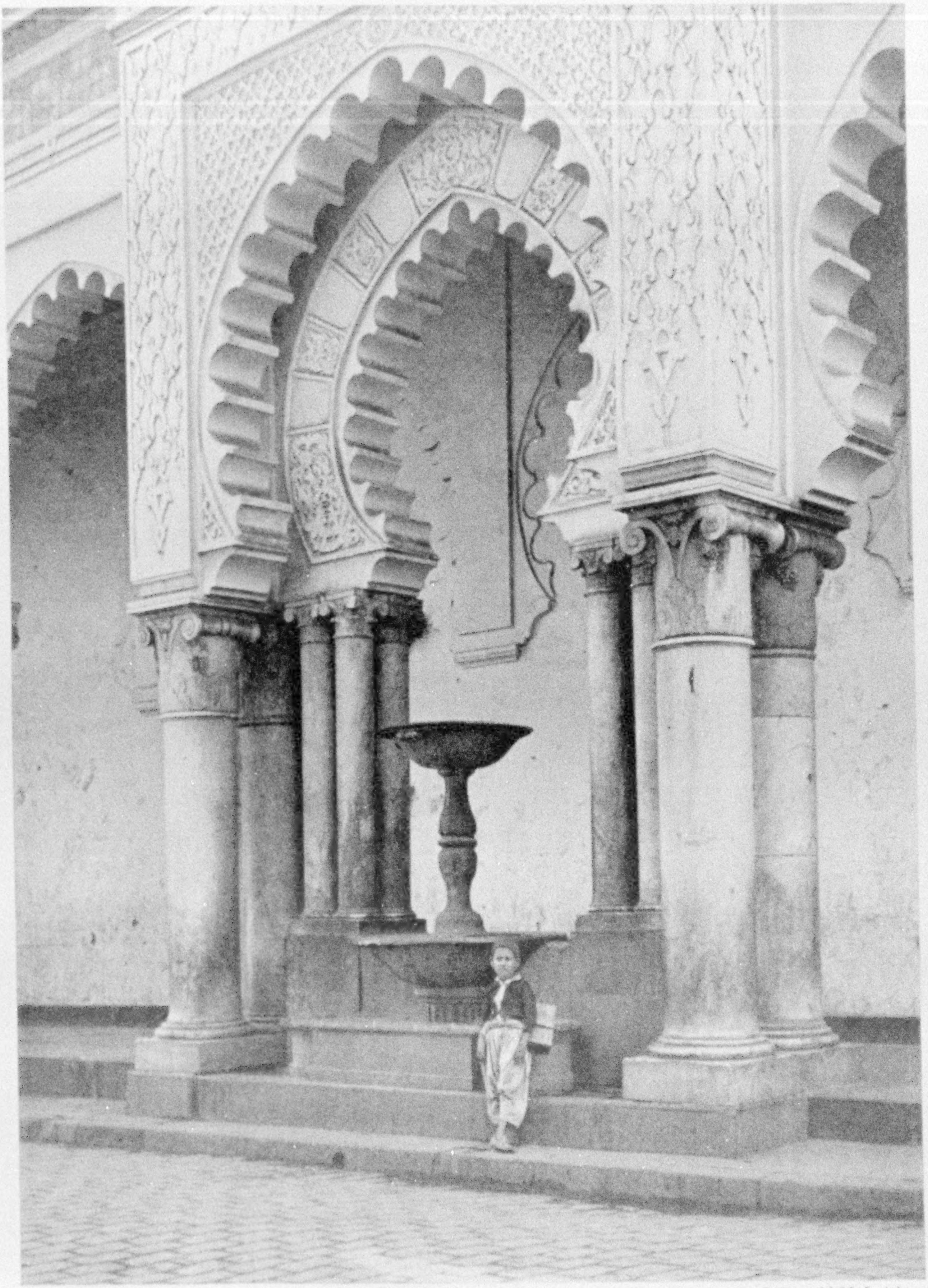
A REST AMONG THE SAND-DUNES SOUTH OF EL WAD: ALGERIA

The Bedouin cameleer must have his tea and a pipe of kief, the desert man's opiate. This Arab carries with him enough food and equipment for 90 days of desert travel.

© Lehnert and Landrock

WHERE THE GOLD OF MANY LANDS BECOMES A WEDDING DOWRY

Among the Ouled Nails, sentiment has little place. In their early youth these girls migrate to the Mediterranean ports, where, as dancers, they entertain the stranger and the wealthy native, and acquire ornaments of gold coins. When their glittering dowry is finally saved, they return to the desert and become dutiful wives in the tents of their own people.



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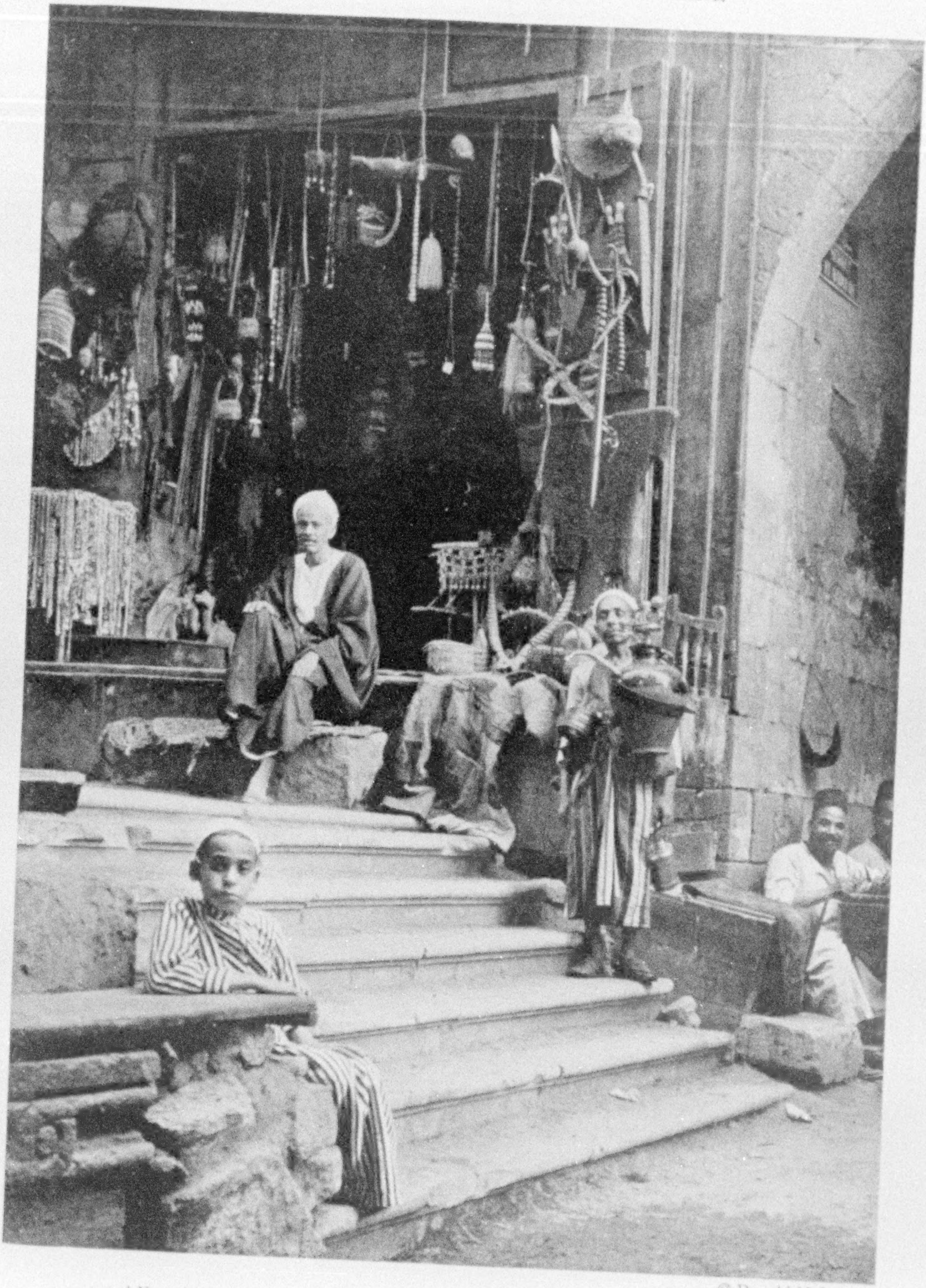
THE HORSESHOE ARCH IN THE GRAND MOSQUE OF ALGIERS

The pride of the Grand Mosque of Algiers (Jamaa-el-Kebir) is the façade, composed of white marble columns supporting an arcade. It is said to be the oldest mosque in Algiers, an inscription on the pulpit showing that it was in existence in 1018.

XUM



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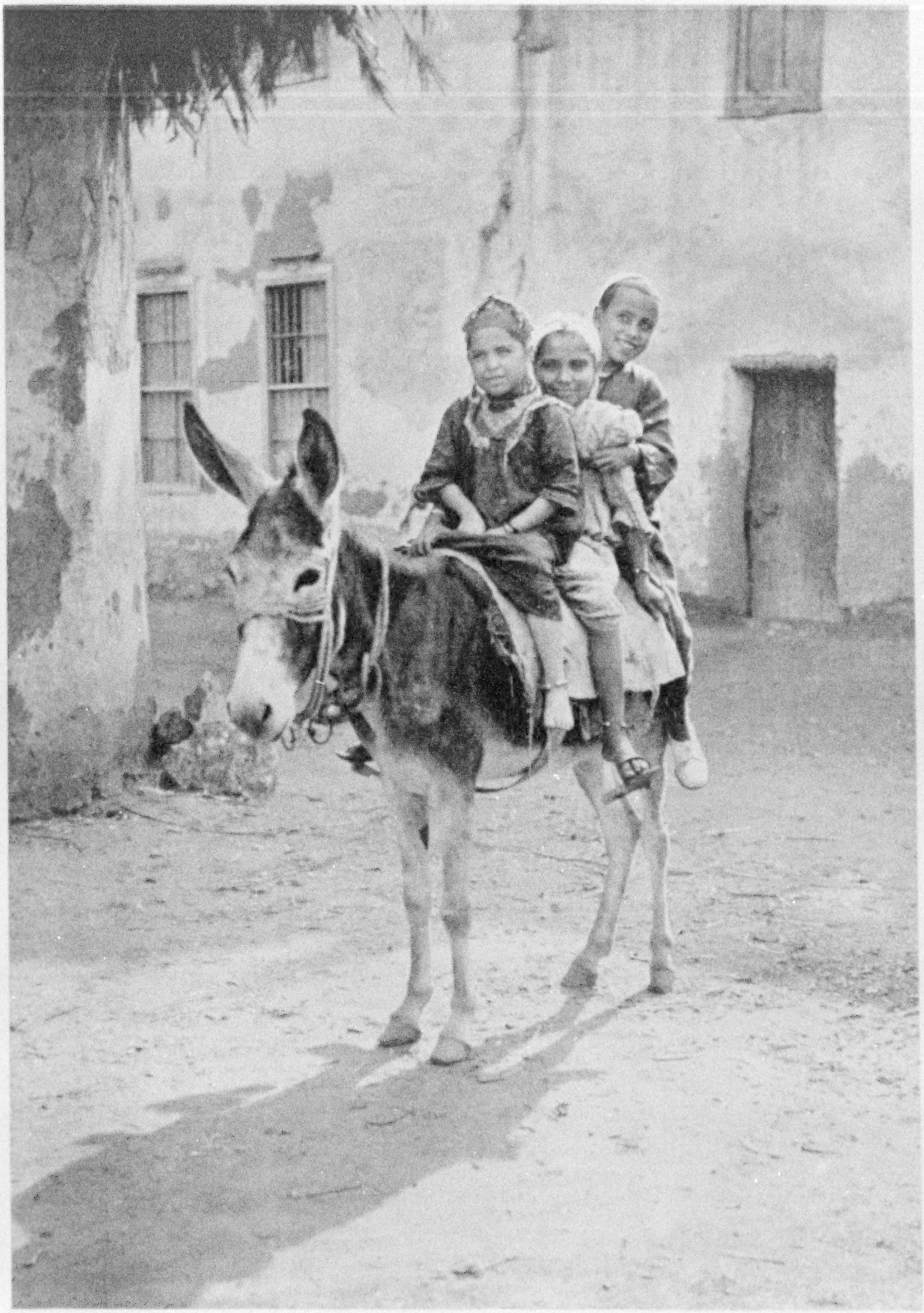
AN AFRICAN CURIO SHOP IN THE KHÂN EL-KHALÎLI, CAIRO

The natives of Africa insist on having their bright beads and other trinkets from Europe. In return they barter baskets, bells, weapons, the horns and hides of animals, and other curios which delight the tourists who cannot take time to go to Gondokoro.



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A COMMON CARRIER IN EGYPT

The donkeys of Egypt are patient playfellows, intelligent, long-suffering, and economical of upkeep. In the cities it is only the natives who dangle their legs beside the animals' flanks, but in Upper Egypt the donkey is the tourist's first aid in transportation.

XUM

Photograph from Kodak (Egypt), Ltd.

THE STATUES OF MEMNON AT THEBES

More wonderful than the proverbial silence of the Sphinx was the traditional greeting which one of these colossal sitting figures of black stone, 50 feet high, gave each morning at the coming of dawn. The story was that Memnon, the victim of Achilles, greeted his mother Eos with a cry at sunrise, and that she shed dew-tears upon her beloved child. Both statues really represent Amenophis III, and the tradition which connected the statue at the right with Memnon dates only from the Roman imperial period, sixteen centuries later.

Photograph from Kodak (Egypt), Ltd.

THE PAPYRUS-BUD COLUMNS OF THE TEMPLE OF LUXOR

Dwarfed as it is by the more magnificent ruins of Karnak, the temple of Luxor is nevertheless a noble monument. To the left is the Court of Amenophis III, the builder, and the heavier cluster of columns to the right is a part of the Pronaos or Vestibule. The grouped papyrus stems forming the columns did not lend themselves to inscriptions and sculptures, so that in later examples the columns are smooth.

© Donald McLeish

IN THE BAZAAR OF THE TENT-MAKERS: CAIRO

The inner wall of an Egyptian tent resembles a wall painting in the Royal Tombs, its highly colored decorations being formed by small pieces of varicolored cloth sewed into patterns. These pieces of patchwork, mounted on heavy canvas, are much admired by the tourist and form interesting souvenirs of the land where such designs illuminate tent and tomb.

© Donald McLeish

AN ARITHMETIC CLASS IN ONE OF CAIRO'S 300 ELEMENTARY SCHOOLS

The average elementary school in Cairo is an insignificant affair, and one sees scant reminders of the traditional Arabic skill in mathematics; but it is to the *kuttâb* of Egypt, as to the elementary school of America, that one must look for its leaders of to-morrow.

Photograph from A. N. Mirzaoff

CHIEF OF THE IMPERIAL GUARDS OF ABYSSINIA

This picture of Pitaonan Yfrau was taken at the coronation of the Empress Waizeru Zauditu in the Abyssinian capital of Addis Ababa. Cabinet government has been in effect since 1919, following a year of personal administration by the Regent and Heir Presumptive, Ras Taffari.

A SHILLUK WARRIOR IN FULL REGALIA

The Shilluks are among the most picturesque inhabitants of the Anglo-Egyptian Sudan. Though skilled as hunters and fishermen, they are principally cattle-herders. They belong to the tall and wiry type of African Negro and through constant exercise become very agile. In the heat of battle, their lithe antics are supposed to strike terror to the hearts of their foes.

Photograph from A. N. Mirzaoff

A CORONATION PROCESSION IN ONE OF AFRICA'S THREE FREE STATES

Italy recognized the independence of Abyssinia in 1896, and ten years later Great Britain and France joined in an effort to keep Abyssinia free. King Menelik died in 1913 and was succeeded by his grandson, Lij Yasu, who was deposed at the age of 20, his aunt, Waizeru Zauditu, taking his place. View is of the procession to the palace during the coronation of the present Empress (see also page 376).

ALONG THE NILE, THROUGH EGYPT AND THE SUDAN

By Frederick Simpich

Author of "The Story of the Ruhr," "The Geography of Our Foreign Trade," "Along Our Side of the Mexican Border," "Every-Day Life in Afghanistan," "The Rise of the New Arab Nation," etc., in the National Geographic Magazine

Ever since the plague of frogs, since Pharaoh's hosts were swallowed by the sea, since Cleopatra's romance and snake-bite, Egypt has been in the eyes of the world.

"Nothing in this strange land is commonplace," Lord Milner has told us; and Napoleon, in his first talk with the Governor of St. Helena, declared Egypt to be "the most important country in the world." For sixty centuries she has been invaded and occupied, ruled and misruled, and ruined and rebuilt by assorted enemies of alien race, religion, and speech. Now, under a brand-new king of her very own, she begins a new era in her eventful, tumultuous history.

No land is older in sin and civilization than is Egypt;* few men are more mixed in race and religion than the modern dwellers along the Nile; and no region anywhere offers more puzzling problems or curious contrasts in politics, economics, and national ambitions than does modern Egypt.

She was civilized and knew the culture of fine arts and science when hairy cavemen were yet clubbing their prey and eating it raw on that island where classic Oxford now stands; yet to-day nine-tenths of her people are illiterate; many are blind from disease, and probably half of the real Egyptians are mere day laborers, for the wealth of Egypt is mostly in alien hands; half of the native farmers, or a million and a half families, own no land at all. Still, in this "Proverbial Land of Paradox" the people along the Nile, thanks to British aid, are better off than they have been in generations.

The fact that the population doubled in the 42 years of British rule is significant. A wonderfully developed irrigation system and a vast network of communications, both so necessary to agriculture in a rainless land, are hers.

In the last seven years land has trebled in value; rich farmers have grown richer; Nile traffic has increased fourfold; into the dusty desert horizon new tracks of steel have penetrated; and away up on the Blue Nile another great dam is being built to impound water for irrigating a yet vaster cotton-growing area.

EGYPT WAXED FAT DURING THE WAR

Egypt, more than any other land then under British protection, waxed fat off the World War. It is said that England paid out over a billion dollars in Egypt for foodstuffs, camels, mules, and supplies for the use of her armies in the Middle East.

With this access of wealth and the break-up of the Moslem East that followed the war, independent Egypt has now gained enormously in political and religious importance. Historic old Levantine ties are broken, too, and new channels of trade and immigration are opened. Caliphs have been upset and kings set up; new frontiers, new republics, and new geography stretch in bewildering disarray from the Suez to the Caspian. And, from the wild, fanatic Senussis of the Sahara to the untamed Afghan in Kabul, restless Moslem hordes brood and look on—doubtfully.

Gone forever is the "changeless, dreamy East" of a decade ago! Growling motor-trucks have crowded crawling camels from historic caravan trails; desert Arabs who used to read the future in the stars now read it in the passing planes of bold airmen blazing a sky trail from Rome to Tokyo, or London to Sydney.

A through train, "The Milk and Honey Express," runs from Cairo to Jerusalem, save for a break at the Suez Canal, when the passengers walk across

* See, in the National Geographic Magazine for September, 1913, "Reconstructing Egypt's History," by Wallace N. Stearns; "The Resurrection of Ancient Egypt," by James Baikie, and "The Sacred Ibis Cemetery and Jackal Catacombs at Abydos," by Camden M. Cobern.

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THE CITY OF THE FATIMITE CALIPHS FROM THE MOKATTAM HILLS

A splendid view of Cairo may be had from the reddish hills which lie to the southeast of the city. In the foreground is the Citadel, with the two slender minarets of the Mohammed Ali Mosque rising high above the wide dome. On the lower level, to the right, are the minarets of the Sultan Hasan and Rifaiyeh Mosques, and the big open square to the right is the courtyard of the Mosque of Ibn Tulún, said to be a copy of the Kaaba at Mecca.

© Donald McLeish

THE STORY-TELLERS' CLUB: AN OUTDOOR CAFÉ IN CAIRO

Merchants, students, and beggars of many clans sometimes congregate at the open-air café, whose specialty is coffee. Smoke and conversation help to round out the menu.

Photograph by A. W. Cutler

THE FLOW OF LIFE OUTSIDE THE BÂB ZUWEILEH: CAIRO

The minarets of the Red Mosque rise above this sturdy gate built by Greeks in the eleventh century. It is one of the old town gates leading into the native bazaars.

Photograph by A. W. Cutler

THE STREETS OF CAIRO

Few cities so combine the ancient and the modern as does Cairo. From the terrace of the tourist hotel to the Sûk of the sandal merchants is a stride of centuries. The donkey has a load of clover fodder, and the camel is acting as taxi for two, with excess baggage.

a floating bridge at Kantara. And the Cape-to-Cairo line is nearly finished, too. How easy, even now, to visualize a Cape-Cairo-Calcutta route, with through trains via Mecca, the Persian littoral, and northern India, tying up at Basra with a Bagdad-Antwerp road, and at Bushire with a future Persian-Russian trunk line! (See Map of Africa, issued as a supplement with this number of THE GEOGRAPHIC.)

An old, old prophecy was fulfilled, the Arabs say, when "The Nile came to Jerusalem"—that is, when Allenby's advancing army laid a pipe line as it marched, bringing fresh Nile water with it across the Arabian Desert to Palestine.* An amazing accomplishment, certainly, yet quite in keeping with the bold, far-flung sweep of the Cross over this region where so long the shadow of the Crescent has lain.

In this far-reaching economic upheaval, white men of various creeds are swarming in to rejuvenate these long-abandoned, Biblical regions. British soldiers are in Bagdad now, and Christian armies have cut and recut the old trails of Genghis Khan, Xerxes, Darius, Marco Polo, and Alexander the Great, and from Cairo to the Cape, 5,000 miles, a Boer flying-man has driven his plane, swooping above reeking jungles where Stanley searched for Livingstone.

Geographically, Egypt comprises all the land between the Red Sea and the Sahara, and runs from the Mediterranean south to the Nubian border, including the Sinai Peninsula; in fact, it is about as big as Arizona and Texas combined. But, except for about 12,000 square miles along the Nile banks and in the Delta (or a region about equal to Connecticut and Massachusetts), Egypt is practically a desert.

Its people, including *fellaheen* (native peasants), Copts, Arabs, Greeks, Syrians, Turks, Persians, and Europeans, number over twelve millions.

Quickly told, the story of modern Egypt is that Napoleon invaded it in 1798; then the Albanian adventurer,

* See "An Old Jewel in the Proper Setting," in the NATIONAL GEOGRAPHIC MAGAZINE for October, 1918.

© Donald McLeish

A SMILING CUSTOMER FOR SWEET DRINKS IN CAIRO

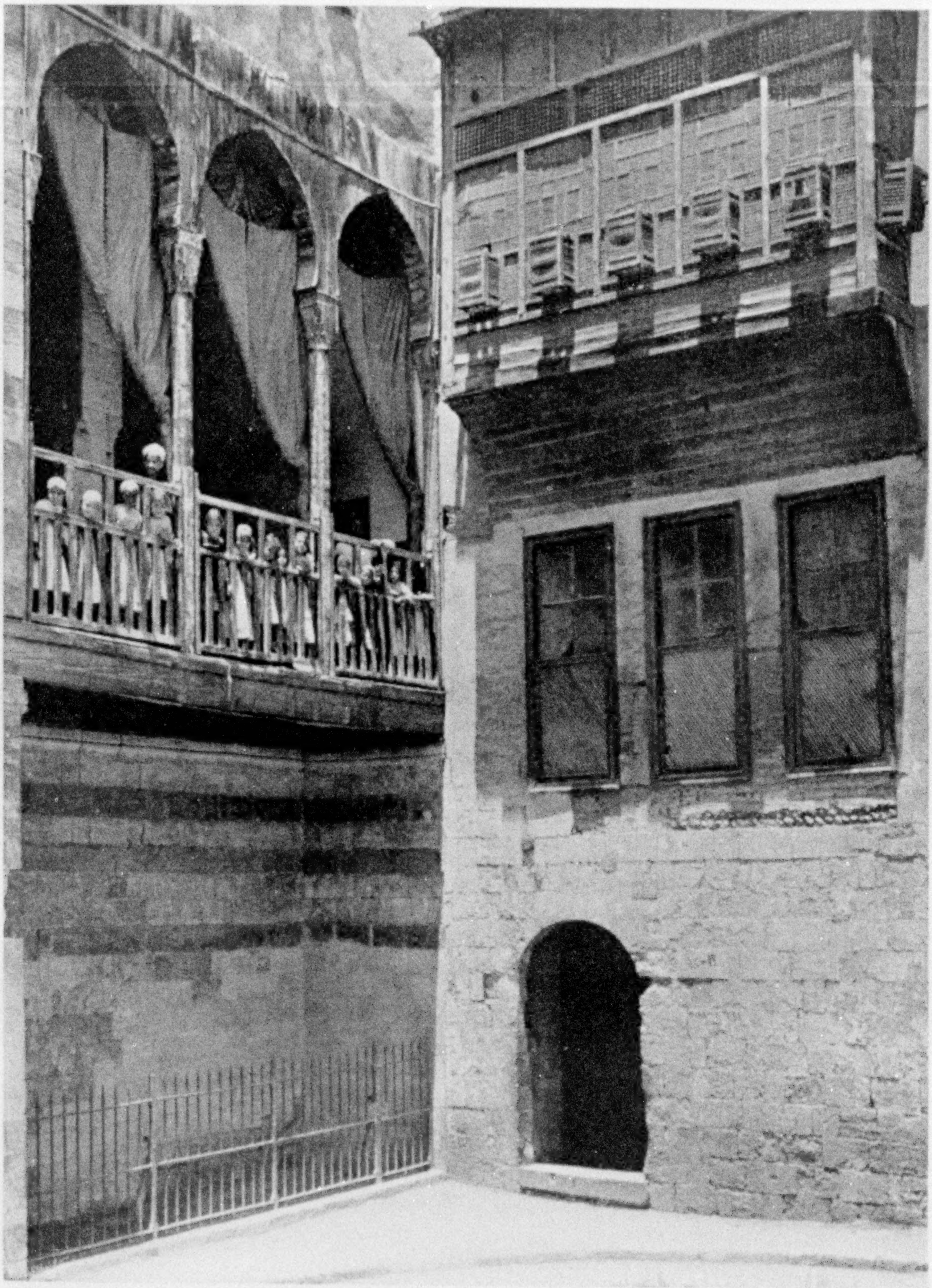
Though a Moslem is not supposed to look upon the face of any woman who is not of his own family, that does not prevent the most cordial relations in common-place affairs of the street, like the buying of a cooling drink from the flabby water-skin with its shiny brass nozzle.

XUM

© Donald McLeish

A STREET IN OLD CAIRO

On its way to the Citadel this artery of the city passes beneath the shadow of the minarets of the Aksunkor Mosque, which is also called el-Azrak, meaning "the blue," because of the rich coloring of its tiles. It was built in 1346 by the ruling Amir, whose name it bears.



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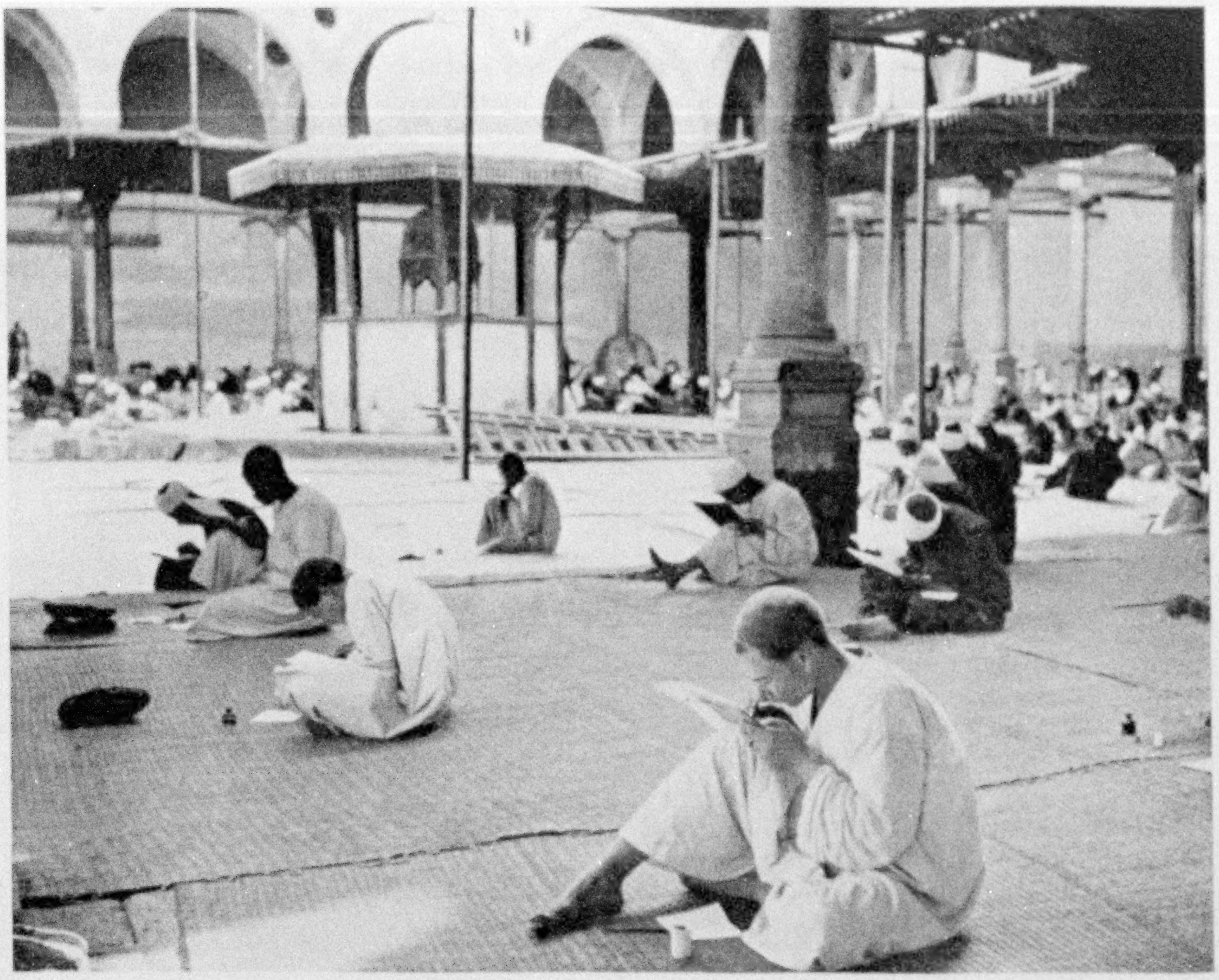
AN ELEMENTARY SCHOOL IN EGYPT'S CAPITAL

Until recently, the teaching of the Koran formed the major part of the course of study in the *kuttâb*, or native elementary school of Egypt. The most rudimentary science was ignored or taught incorrectly. Under the British, conditions were improving. Now Egypt faces its own educational responsibilities.



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A CAIRENE EXAMINATION HALL

Amid ancient columns dating back to the Ptolemies, in a fourteenth century mosque built by Amir Altun Bogha el-Mârdâni, the modern theological student takes his examination in the doctrines of the Koran. Less famous than el-Azhar, which is Egypt's largest university, el-Mârdâni is a prominent factor in theological education in the capital.

Mehemet Ali, and his successors held mastery till it went bankrupt in 1879.

To protect creditors, France and England intervened, deposed Khedive Ismail, and set up a "dual control." Against this rule Arabi Pasha led a rebellion, which the British crushed at the battle of Tel-el-Kebir.

For the next 35 years khedives of the Mehemet Ali dynasty nominally governed, being advised by the British Consul-General at Cairo, whose advice, not strange to say, was usually taken.

From 1883 to 1907 Lord Cromer, a most able officer, held this advisory post, and raised Egypt from bankruptcy to prosperity. When the World War began, the reigning khedive Abbas Hilmi, long restive under English control, threw in his lot with the Turks (who had never relinquished their claim to sovereignty over Egypt), and a Turkish army moved down to Gaza to drive the English out. But England, regarding the Suez Canal as the jugular vein of her empire, could not then risk losing her foothold on the Nile. So, on December 18, 1914, Egypt was openly declared a British Protectorate.

EGYPT'S DARING AND SUCCESSFUL DRIVE FOR INDEPENDENCE

Hardly were the guns of Europe silent before Egypt began her daring drive for independence. It astounded even the East—this sudden, sensational leaping to life of a race so long bent to alien yoke. Dramatic as the story is, however, it need only be said here that in 1922 the British relinquished their protectorate, and acknowledged Ahmed Fuad as King of Egypt. (On April 25, 1922, the United States officially recognized the new nation on the Nile.)

Photograph by Maynard Owen Williams

THE SUEZ CANAL AT KANTARA

During the war, Kantara was the base of supplies for the Palestine military force. Its wharves, flood-lighted at night, were scenes of great activity, and back of it on the desert airplanes droned above the landing fields. Both foot-bridge and railway bridge crossed the canal, so that a Cairo carriage could be carried to the hill overlooking Jerusalem. Now the military stores have been distributed and Kantara is once more only a way station on the neck of land which unites Asia and Africa. The railway bridge has been removed.

This rise of Egypt to independence and the separation of Syria, Palestine, Mesopotamia, and Arabia from the old Ottoman Empire throw open the whole of this rich, long dormant land to barter and free contact with the Christian world.

Many important new channels of trade and travel are now being opened in these newly freed regions of the Middle East, whose people and potentialities the Turk so long and so cynically ignored. It is not yet easy to say whether immigrant Jews can really make a success at farming in Palestine in competition with settled Arabs; but with King Feisal on the throne of Iraq at Bagdad, and the British at his elbow, we know what to expect from Mesopotamian irrigation and oil development. And the trade of Syria under Greek and French stimulus is bound to grow enormously.

All these changes in the map, in trade routes and economic relations must necessarily have a marked effect on the new nation of Egypt. South of Egypt, too, lies the great Sudan, destined to add a vast area to the world's cotton-growing territories.

Till now Egypt, though so well known in many ways, has always been singularly aloof and isolated in her economic life. Most of her trade has been with the nations of western Europe. Greeks, Italians, and Austrians, settled in Cairo and Alexandria, have practically dominated Egyptian industry. Now, however, the new railway built from Cairo to Jerusalem ties up Egypt and the rest of Africa with the most important parts of the old Turkish Empire and indirectly with Europe itself. Much of the sea trade that formerly belonged to Smyrna and Stamboul will now reach its destination through Alexandria and Port Said.

With the near completion of the Cape-to-Cairo line, it is easy to see what close

Photograph by Maynard Owen Williams

A STATION ON THE RAILWAY FROM EGYPT TO SYRIA

This scene, taken near the Egypt-Palestine boundary, shows the desolate type of country through which the British drove their military line. From Kantara, beside the Suez Canal, to Jerusalem is a trip by rail of less than 12 hours.

trade connections Egypt must eventually develop with the vast domains to the south.

THE STORY OF A DESERT RAILROAD

Traveling one day, back in 1911, from Suez to Ishmailia, I met a Russian officer with whom I had once been quarantined on a pilgrim cholera ship at Jidda. "Some day," he said, "after there's been a big war in these parts, you'll see a railway running down here from Moscow and bridging this canal." Prophetic enough—except in certain details!

You who have made the voyage through Suez and recall its dreary sand stretches will find it hard to realize that, during the war, a magic city of 120,000 people sprang up here half-way between Ishmailia and Port Said. Kantara, this freak, mushroom, soldier town is called; it is the Suez terminus of the famous desert railway built north to Jerusalem.

When Allenby's hosts were invading Palestine, warehouses stretched for a mile along the Canal banks at Kantara, and at night high arc lamps glared above the yellow desert. Men toiled by tens of thousands, as when the pyramids were building.

This remarkable railway, starting north from Kantara, was laid on the sand, mile after mile, as the troops advanced; along with the track was laid the famous pipe line, carrying fresh water from the Nile, for hundreds of miles.

Pushing forward through the deep sand and lonely desert levels of the Sinai Peninsula, this road penetrates Palestine and traverses the fertile plains of Gaza. From Ludd, a branch (following the right of way of the old French line from Jaffa to Jerusalem) climbs the mountains to the Holy City, 200 miles from the Suez Canal.

The main line, running through the generally fertile and level area between the mountains and the Mediterranean, has its terminus at the seaport of Haifa, beneath the stately slopes of Carmel. One writer says: "To those who were present at Jerusalem on June 15, 1918, and witnessed the departure of the first through

Photograph by William Reid

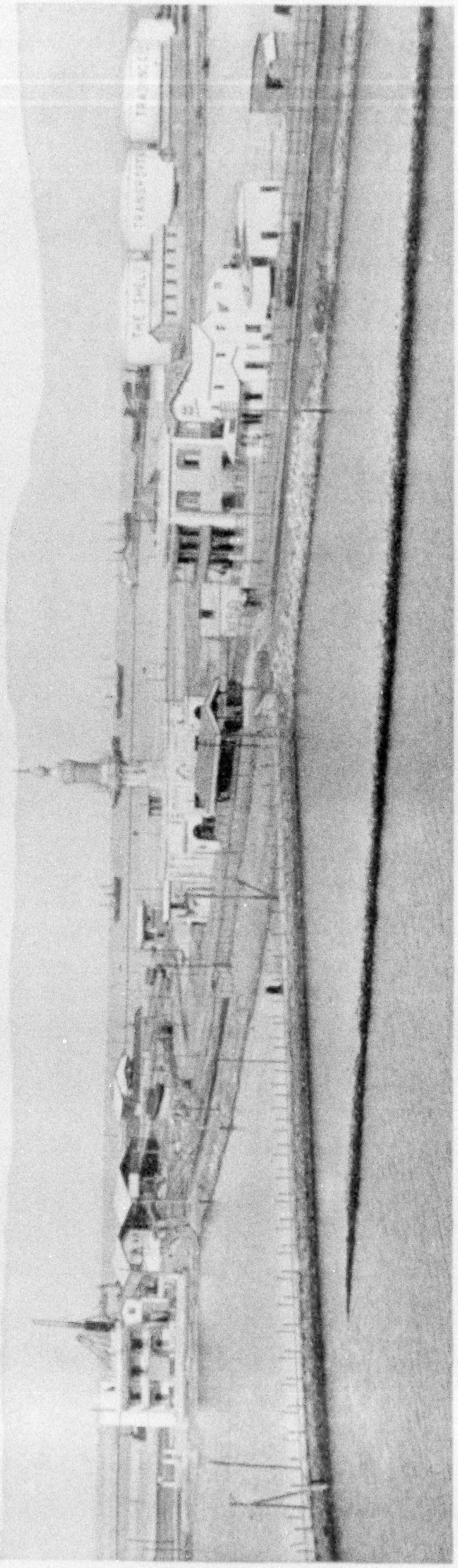
COALING A STEAMER AT PORT SAID, THE ENTRANCE TO THE SUEZ CANAL

Primitive methods of coaling are still employed here, each native carrying a little basketful on his shoulder and emptying it through a hole in the deck. All the traffic to and from the East converges at the port, and there are often dozens of steamers in the roadstead. The domes of the Canal Administration buildings are seen in the distance, with the city to the right.

© Donald McLeish

CHILDREN OF THE ARAB QUARTER OF PORT SAID

The Arab Quarter of Port Said was notorious until war conditions made it necessary that this section of the city be cleaned up. Few places ever underwent a greater change. Dumping place of the world's riffraff, it long since had brought disrepute upon the Arab himself, who is usually abstemious and sober.



Photograph from Frederick Simpich

WHERE "EAST OF SUEZ" BEGINS

Before the construction of the canal, Suez was a miserable Arab village. Now more than 2,500 Europeans share the misery. Hot, bare, sandy, and cheerless, Suez is made more intolerable by the endless procession of tantalizing ships passing by on their way East or West.

train in history from the Holy City to Cairo, it seemed as if a significant step had been taken in the onward march of civilization."

Notwithstanding the great demands on it during the war, when military trains ran from Cairo to the farthest boundaries of Syria, the system held up very well. Its distances in Egypt are not very great. Cairo is only 130 miles from Alexandria and 236 miles from Assiut; the more important commercial towns, such as Tanta, Benha, Zagazig, and Damanhur, are all in the Nile Delta.

HOW EGYPT PROFITED BY THE WAR

Egypt profited greatly from the war. The British army poured out vast sums for camels, mules, grain, and supplies, and thousands of Egyptian laborers and artisans were paid war-time wages. As a half-way station between East and West, Egypt became the clearing-house for troop-ships from the Seven Seas.

After the evacuation of Gallipoli, a whole army came to Egypt to rest and reëquip. Vast hordes came, also, from Australia, New Zealand, and India, to organize and train.

The dry, clear desert air and open spaces made of Egypt an ideal training ground for flying-men, and for months the planes of daring students from the world's outposts split the sky above the Pyramids and the Sphinx, and hovered over the old battleground of Tel-el-Kebir.

Fugitives of all races fled thither—some are still there—from beyond the Jordan, and German colonists from Jerusalem and Jaffa were taken there and interned. In Egypt, also, were housed the thousands of

prisoners captured during Allenby's two campaigns; in a single prison hospital at Cairo there were 12,000 beds.

To-day Alexandria is rich. During the war she was the base where all supplies for the Saloniki, Mesopotamian, and Egyptian expeditions, as well as for the operations against German East Africa, were stored.

For his Jerusalem campaign, in 1917, Allenby had a force of 260,000 British and Indian troops. In 1918, when the invasion of Syria began, the strength of the Egyptian force, including whites and Indians, was about half a million men and 260,000 animals.

It cost $200,000 a day to feed this army and much of the supplies came from Egypt. Large sums were spent also in wages paid to Egyptian tradesmen, carpenters, blacksmiths, and the like. Cash was paid, too, for the 30,000 camels which were in use.

Thus wealth poured into Egypt, which seems to have suffered less from the shock of war than any other country then under British control.

Many of us know Egypt as tourists know any other country. You will all recall the old fakir at the "Continental," in Port Said, who rolls an egg between his palms till it turns to a live chick, while his assistant inhales a tired snake or plucks a fat toad from the beard of a scandalized Scotchman.

Some of you, too, have bought "real Egyptian antiques" and "scarabs" made in Naples; and you have marveled over mummies 3,000 years old (fitted with teeth, for verisimilitude, bought from an advertising dentist in London). And every year enough ancient coins are "found" to meet all demands!

In other words, we know superficial Egypt—the donkey boys, the beggars whining for bakshish, the smirking guides; we have seen the tawdry *café chantant*, and Shepheard's, and we have been photographed astride a blasé, flea-bitten old camel standing on the sands before the Sphinx.

But we Westerners, what do any of us really know of the *Egyptian?*

I remember a night at Kantara. Standing where the pontoon bridge now is, and where the ancient caravan route from Egypt crosses the Suez on its way to Syria, in the red blaze of desert dusk, I saw a woman, an erect, slim-limbed woman of the Nile, barefooted, in all the unconscious dignity of ancient race. On her head she carried a water-jar—gracefully and easily, like Rebekah on her way to the well. About her lithe form flowed the black folds of the loose, primitive robe that marks the Moslem woman.

Casually, without interest, from over the rim of her yashmak she glanced at us; but with what eyes! Lustrous, long-lashed, unlike the eyes of any other women anywhere—eyes set under heavy, straight brows, the odd eyebrows of old Egypt.

"A woman of the pyramids," whispered my companion, "young and a good looker, yet 6,000 years old in face and form!" Handsome she was, indeed; yet astonishingly like the crude pictures of the women of ancient times, as we see them carved on the temple walls.

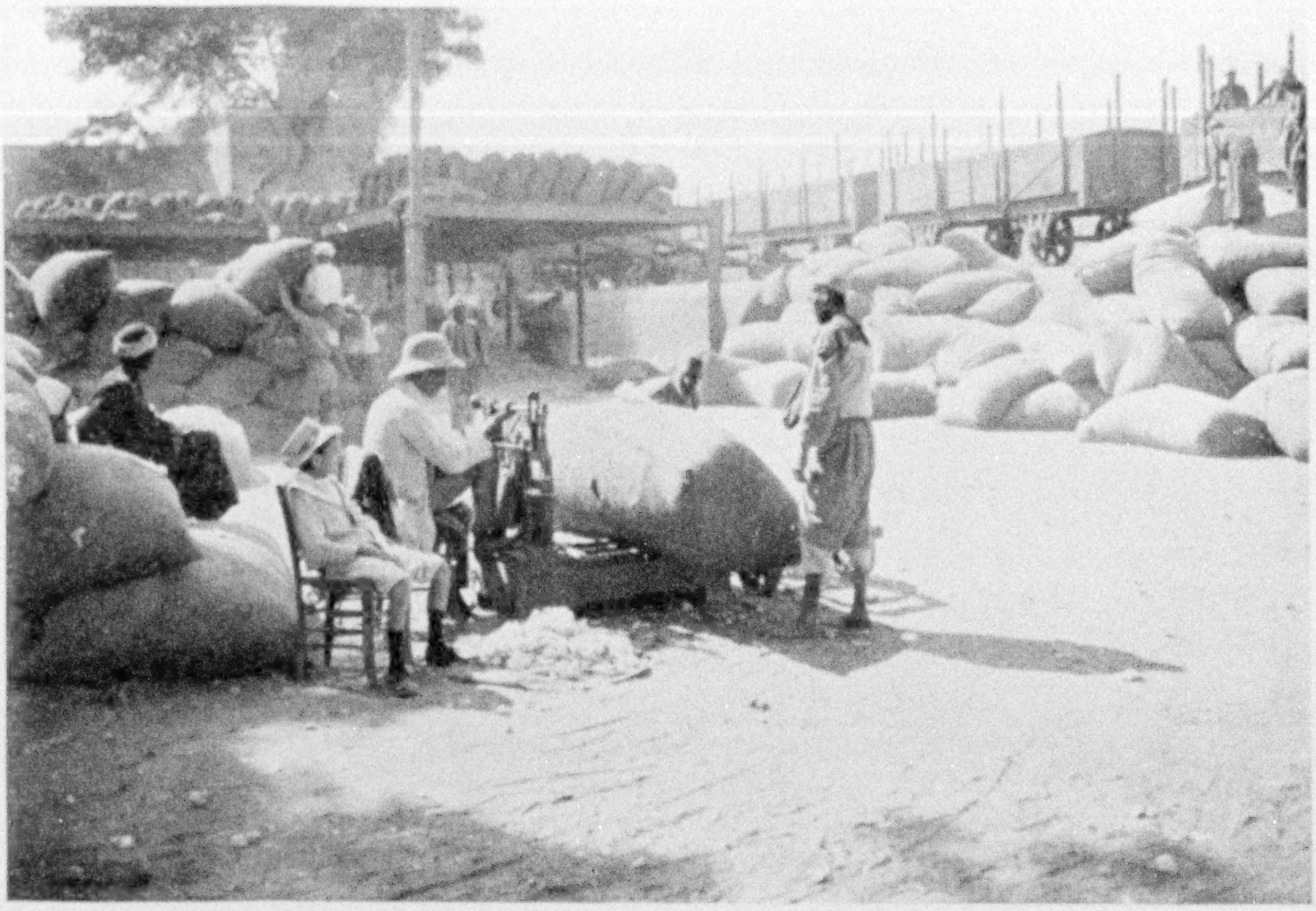
"THE INARTICULATE FELLAH"

These strange people, isolated here for ages, have developed and maintained certain distinct physical and racial characteristics. When you see the modern *fellah* at work with mallet and chisel, or scratching the sun-baked plain with his crude hoe, or dipping his clumsy fish-net into the Nile, he is, in face and physique, startlingly like the pictured Egyptians of the Pharaohs' times.

Since prehistoric days this race, a vast farming colony, has lived along the Nile and in that great delta which ages of floods have built out into the Mediterranean. Though the Persian conquest, about 521 B. C., ended the period of native rule, the mental and physical aspects of the modern fellah are, so far as we can judge, exactly like those of his early ancestor who sweated under the Pharaohs—and this notwithstanding centuries of submission to Persian, Macedonian, Roman, Arab, Mameluke, Turk, and Briton.

Four-fifths of all Egypt's population, or something near nine millions, belong to this ancient race.

Culturally, the fellah has been Arabized; he speaks a form of Arabic and turns to Mecca in his prayers. Otherwise he is the same silent, melancholy,



WEIGHING BAGGED COTTON IN EGYPT

Photographs from A. N. Mirzaoff

TRANSSHIPPING COTTON AT ALEXANDRIA

Egyptian cotton has won an enviable reputation, but at great cost to the soil. The annual inundations do not now furnish enough fertilizer for the crop and some fields are never inundated, but get what water they need from irrigation canals.

Photograph from A. N. Mirzaoff

PUTTING STRENGTH BACK INTO THE SOIL: AN EGYPTIAN COTTON FIELD

inscrutable person who doggedly dragged granite blocks for hundreds of miles to build the pyramids, who blindly bent to the big sweeps of the early Egyptian galleys, or who conceived and began to dig the Suez Canal centuries before de Lesseps was born.

Hard work is his lot from the cradle to the grave. Riding through the great Delta region, you will see a boy or girl of eight leading the ox in the fields, while the father holds the rude plow. The children herd goats, too, and aid in cotton-picking.

THE NILE'S GIFT IS MARRED BY MUD

And though "Egypt is the gift of the Nile" it is a gift with a string to it, whose name is *mud*. Keeping the canals free of silt and keeping the water going has, figuratively, broken the tired backs of millions.

Many power pumps are in use, of course, especially on the larger estates; but to-day gasoline is scarce and expensive, and the average small farmer must water his little patch of land with the *shâdûf*, a primitive balancing apparatus wherein a long pole with a rock weight on one end and a pail on the other is used to lift water from the canals.

Two other awkward but ancient irrigating machines are the "water snake," or "Archimedean screw," and the *tâbût;* these wooden water wheels are used to lift water from the canals and pour it onto higher levels.

The thousands of miles of canals serve not only for irrigation, but also to distribute drinking water and as channels of traffic. Sail-boats on these ditches, seen from a distance, seem to be running on the ground over the flat country.

The Mahmûdiyeh Canal connects Alexandria with the Nile, and the Ishmael Canal takes off from the Nile near Cairo and carries water to Suez.

Nile mud alone no longer is adequate to enrich the fields, and to-day the fellah must buy much high-priced imported fertilizer.

The renter usually leases a piece of land for two or three years; the owner furnishes seed and work animals, and takes his share of the crop. Cotton, sugarcane, corn, wheat, and rice are staples. Egypt grew corn for export to feed Rome in ancient times.

Photograph by Earle Harrison

A SUGAR-CANE CAMP ON THE UPPER NILE

During the last few decades the cultivation of sugar-cane has become an important industry along the Nile.

Photograph from Kodak (Egypt), Ltd.

SHELLING CORN IN THE NILE VALLEY

Ever since the days of Joseph and his brethren, Egypt has been known as the granary of the Near East.

Photograph from Kodak (Egypt), Ltd.

AN ORIENTAL VERSION OF THE OLD OAKEN BUCKET

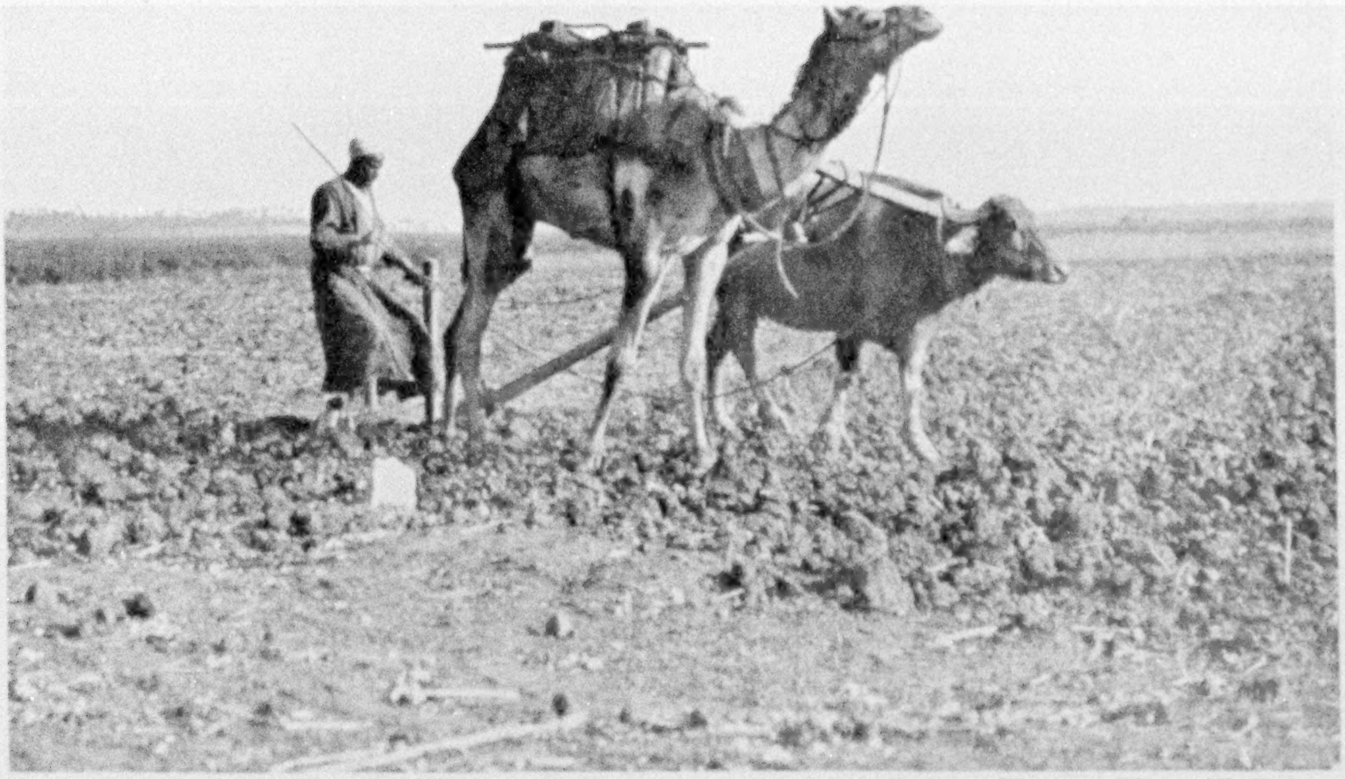
The shâdûf is a familiar sight along the banks of the Nile and the canals. The water basket of woven reeds is balanced by a counterweight of mud.

Water-buffalo, oxen, and camels are the chief work animals on the farms; most of the horses and donkeys in Egypt are owned by the townspeople.

While the milk of goats, cows, and camels is used, the fellah depends mostly on the water-buffalo for his milk supply. This ugly, awkward beast requires less food and gives more milk than the cow and is less susceptible to diseases.

Few animals are raised for slaughter, probably because of the unfavorable climatic conditions. Turkeys and chickens are numerous, but domestic ducks and geese are rare. Around the margins of the lagoons, however, and in the Nile Delta waterfowl, snipe, and other shore-birds are abundant; snipe are trapped in great numbers—in so wasteful a manner that police regulations now seek to protect these birds. And you who know the Suez trip will remember the amazing number of flamingoes that rise and fly about as your steamer passes through the Bitter Lakes.

Nile fish are fat and unsavory; along



Photograph by A. W. Cutler

THE UNEQUAL YOKE OF THE EAST: AN EGYPTIAN FELLAH PLOWING WITH A CAMEL AND A BUFFALO

The forked stick of the days of the Pharaohs is still seen along the Nile, although the cotton boom stimulated the importation of more modern implements.

the seacoast Arabs catch fish enough for the hotels in the larger Egyptian cities.

HOME LIFE IN EGYPT HAS ARABIC FLAVOR

In the daily home life of the country fellaheen, the influence of Arab culture is uppermost. "Marry what you like of women, by twos and fours," says the Koran; so polygamy exists; but it is too expensive for the average fellah.

Every village has its coffee-shop, where water-pipes are for rent. Here, too, is the ever-present professional story-teller, the letter-writer, the snake-charmer, the fakir, and the dancing-girl.

From our viewpoint, such a life is hopelessly dull. The Egyptian monologue artist has told the story of Sultan Baibar and the adventures of Abu-Zed, without variation, for probably a thousand years; every member of the coffee-house crowd knows the yarn by heart; also, the tune that is played on the "Aüd" lute, the "Nai" flute, and the "Kamenge" fiddle, for it is always the same. So is the Egyptian dance—not a new step or movement since the days of Rameses!

Amusements are more varied in the larger towns. Here American moving pictures are shown, shabby one-ring traveling circuses are met, and the rising generation is beginning to go in for games and sports.

Plainly, a new era is dawning in Egypt, and it is admitted through all the East that far-reaching economic and cultural changes are sweeping over the country. But it probably will take many years of progress to transform the slow-moving, fatalistic fellah of the lower rural class. He still sticks to his humble mud hut, scantly furnished with earthen pots, tin cans, and straw mats, and to the habits of life and work that long centuries have drilled into him.

Building contractors say the fellah would rather carry dirt in a basket than use a wheelbarrow because his ancestors had no wheelbarrows. And, says the fellah, vaccination and similar hygienic measures are sinful, for is not one's fate

Photograph from Kodak (Egypt), Ltd.

LOCAL COLOR FOR THE EGYPTIAN PICTURE

Bare-foot women go back and forth between their mud-walled huts and the slippery banks of the muddy Nile, with earthern water jars perched at rakish angles on their steady heads.

predetermined by Allah, and is it not a sin to fight the will of Allah?

Should an enemy with the "evil eye" turn his glance upon one's camel, the camel will go lame, of course; what's the good of worrying? *Kismet!*

FOUR CHILDREN IN EVERY HUNDRED ARE BLIND

Four children of every hundred in Egypt are blind in one eye, a horrified scientist estimates, simply because fatalistic parents sought no timely remedies. Infant mortality reaches 27 per cent.

Any precise definition of Egyptian racial groups is impossible. "Who is an Egyptian?" is an ethnological enigma handed down from Pharaoh to Pasha. Even the official Egyptian census-taker has divided the Egyptians, as well as he could, into, first, natives; second, Syrians and Armenians; third, semi-sedentary Bedouins—that hybrid between fellah and Bedouin, who has one foot on the cultivated land of the Nile Valley and the other on the desert; and, fourth, nomad Bedouins, who are Bedouins pure and simple.

There are many other foreign elements in Egypt besides the English. Alexandria, for example, is said to be as cosmopolitan to-day as it was 2,000 years ago. Greeks were to be found there in great numbers under the Ptolemies, and to-day they permeate every branch of commerce. Italians are encountered in all walks of life. More than a hundred years ago French civilization was implanted along the Nile, and French is still the most widely spoken foreign tongue.

The Turks, who have lived in the country five or six centuries, still constitute the aristocracy of Egyptian society; but till recently, at least, they intermarried little with the Egyptians. Syrians, as money-lenders, pawn-brokers, and merchants, swarm in all the towns and trading centers.

THE COPTS, MOST NUMEROUS OF CHRISTIAN GROUPS

Of the three Christian groups—Armenians, Syrians, and Copts—the last named are by far the most numerous, nearly 700,000, according to the last census.

Though Christian in name for 1,500 years, as Lane says, the modern Copt has become in manners, language, and spirit a Moslem. Coptic women are almost as secluded as Moslems. Their children are generally circumcised, and the Coptic marriage and funeral ceremonies are very similar to those of the Moslems.

In his great work, "Modern Egyptians," Lane sketches the Copt as a sullen, bigoted, avaricious, and dissembling character. Sir John Bowring is less harsh. Although the Turks, he says, have always considered the Copts "the pariahs of the Egyptian people, yet they are an amiable, pacific, and intelligent race. They are to the counting-house and pen what the fellah is to the field and plow."

Cromer compromises by saying that the chief difference between the Copt and the Moslem is that the former is an Egyptian who worships in a Christian church, and the latter is an Egyptian who worships in a Mohammedan mosque. He adds that the Copt has a more accurate habit of thought than the Moslem, and, therefore, makes a better bookkeeper, surveyor, or engineer. Many Copts have been educated in the American missionary schools of Egypt. The late Minister of Finance, Yussuf Wahba Pasha, belonged to this group.

THE SYRIAN A POWER IN EGYPTIAN FINANCE

The Syrian—bland, shrewd, and cosmopolitan—is to Egypt what the international Jew is to Europe—a power in finance, a silent partner in politics.

Cromer says: "Whether judged from a moral, social, or intellectual point of view, the Syrian stands on a distinctly high level. He is rarely corrupt. There are many gradations of Syrian society. A high-class Syrian is an accomplished gentleman. . . . It may be said with truth that he is really civilized. In this respect he is probably superior not only to the Copt, but also to the Europeanized Egyptian, who is too often but a mere mimic."

Though certain Armenians of distinction, like Minister Tigraine Pasha, have held high offices in Egypt, they are represented along the Nile mostly by the shop-

© Elmendorf, from Galloway

A SAND-STORM ON THE BANKS OF THE NILE

Egypt is so thoroughly tamed, as far as the rich tourist is concerned, that the coming of a sand-storm, like this one at Beni-Hassan, forms a new thrill, unwelcome at the time, but fascinating in retrospect.

keeping class and are comparatively few in numbers.

THE BERBER'S PLACE IN EGYPTIAN LIFE

The Berbers, strung along the Nile from Aswan to the Fourth Cataract, and known also as Nubians, are quite different from the rest of Egypt's peoples. Though lazy and incapable, they look on the Egyptians with contempt and never intermarry with the fellaheen. Many white men, moreover, will tell you the Berbers are more honest and dependable, when they do work, than are many other natives.

The small, sandy farm of the Berber, with its meager fruit crop, is hardly enough to support him, so he and his older sons usually go to work as farm laborers for a part of the year in Lower Egypt.

In Alexandria and Cairo the Berbers are in demand as servants, grooms, and coachmen; and there the modern idea has caught on, for we find the one-time "big black Nubian slaves," who used to stand naked beside Pharaoh's throne, waving peacock fans to keep the flies off His Idle Majesty, now organized into a labor union and using the strike to force their demands!

EGYPTIAN WOMEN HAVE COME TO THE FRONT

In fact, among the political phenomena of Egypt, the strike as an economic weapon is becoming quite common. And another phase of the national idea, or emotion, is the part Egyptian women are playing. Sharing their husbands' ambitions, they helped put the Egyptian nation on the map.

Like the modern Turkish women of Stamboul, many of these Egyptian women, Moslem and Copt alike, are versed in the literature and politics of Europe, and often during the struggle for independence they joined with the men in signing petitions to the British Government.

The famous University of el-Azhar, the chief seat of learning and center of political thought of the whole Moslem world, is located in Cairo. Though pupils come from all over the Mohammedan world, Egypt sends most of them; and, as a sign of the times, it is significant that many of these students are the sons of the fellaheen. To a certain extent it was these students who, returning to the rural regions, spread the new doctrines of freedom and equality learned at the university, and helped to win independence.

The Egyptian native press, too, is influential; one paper printed at Cairo has a circulation of about 20,000 copies. Egyptians who cannot read gather in the bazaars in the evening to hear the papers read aloud by students. In all towns the mosques are sources of propaganda and political teaching, and the Copts, though Christians, are, oddly enough, allowed to speak on political subjects at the mosques.

THE FUTURE OF THE SUDAN

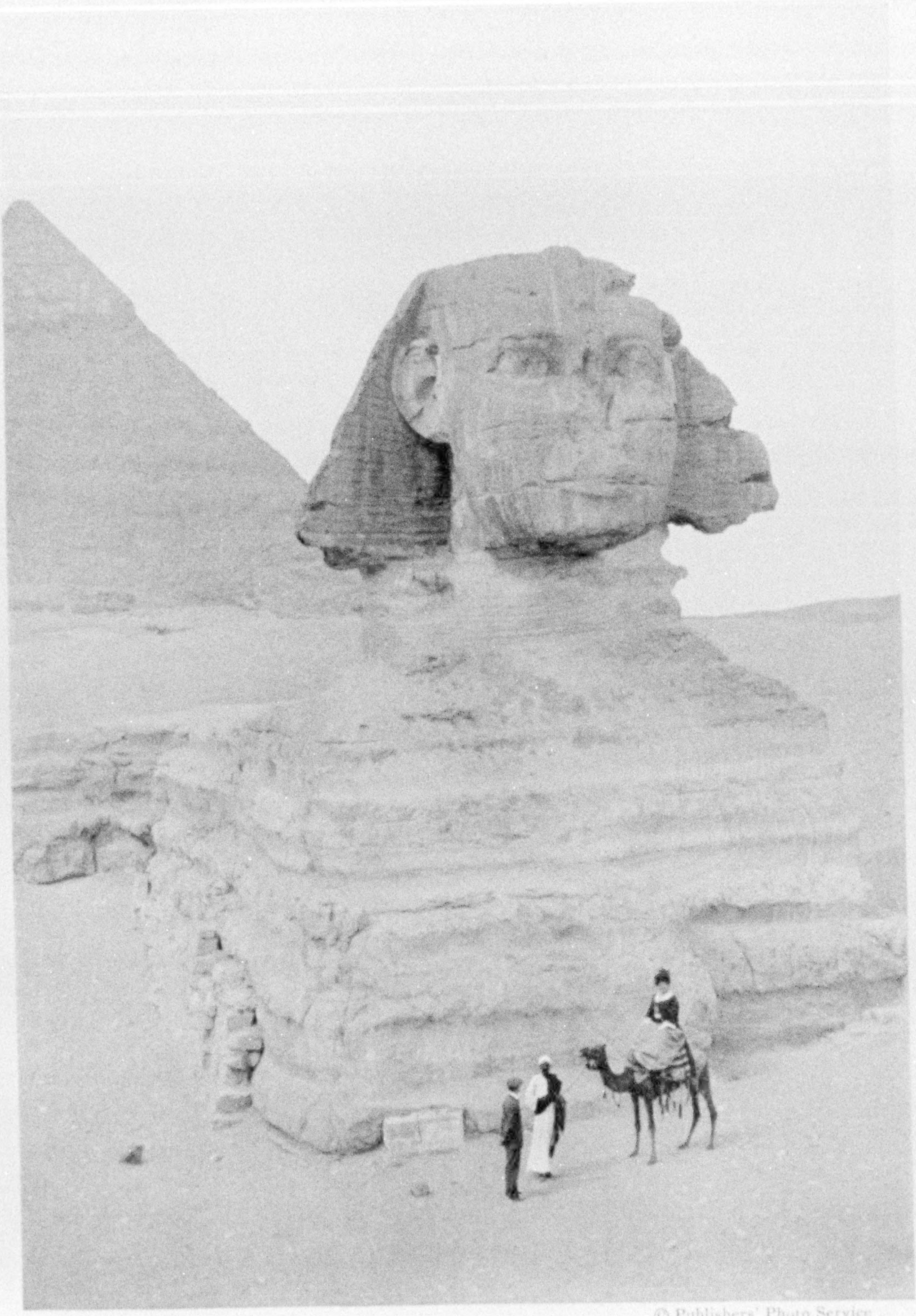
The economic and political future of the Sudan is closely linked up with that of Egypt.

Since that day in January, 1885, when the mad men of the Mahdi killed General Gordon with their spears, many a stirring scene in the drama of civilization has been staged in the Sudan. Like Bagdad, Afghanistan, and the Forbidden City, the Sudan is one of those picturesque places whence adventure and romance seem always to spring.

Because of our own growing cotton shortage, the Sudan holds new interest for us, as it is called the greatest potential cotton land in the British Empire. In area it covers about a million square miles. No count has ever been made of its people, but they are estimated at three and a half million. A few British officials (about one to every 10,000 square miles), with the help of minor Sudan and Egyptian assistants, administer the government.

A THINLY PEOPLED LAND OF AMAZING DISTANCES

A sort of Arab mixture inhabits the north of the Sudan, and in the south are the blacks. In the east you find your old friend the "Fuzzy-Wuzzy." On the whole, it is a thinly peopled land of amazing distances. You can go south from the Egyptian frontier six hundred miles by rail before you get to Khartum. From there south you can go another thousand miles on a flat-bottomed, paddle-wheel



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"FORTY CENTURIES LOOK DOWN UPON YOU"

Riding an antediluvian camel under the broken nose of the Sphinx has been a favorite outdoor sport in Egypt since the time of "Innocents Abroad." One has the sense of being held in suspense by history while the ever-ready camera records the grain of incident in the desert of time.

Photograph from Kodak (Egypt), Ltd.

THE PORTAL AT KARNAK BUILT BY THE THIRD PTOLEMY

This impressive gateway, erected by Euergetes I and representing the conqueror of the Seleucidæ praying and sacrificing to the gods of Thebes, ushers one in to the wonders of Karnak.

Photograph from Frederick Simpich

A CARAVAN PASSING THE RUINS OF OLD MEMPHIS

For nearly fifty centuries Memphis commanded the admiration and wonder of resident and traveler. To-day a prostrate colossus of Rameses II is about all that any one would care to see.

Nile steamer before you reach the southern boundary of the Sudan, which is almost on the edge of the great lakes and a third of the way to the Cape of Good Hope.

Some travelers enter from the Red Sea via Port Sudan (700 miles south of Suez), proceeding west by the new railway.

The White Nile splits the Sudan for nearly 2,000 miles from south to north and is navigable the year round above Khartum.

The Blue Nile runs down from the Abyssinian hills and joins the main river at Khartum, forming an apex called the Gezireh, or "Island." This vast flat island is the granary of the Sudan.

It is in the northern part of this Gezireh that the new irrigation projects are being undertaken. Engineers say land is the cheapest thing in the Sudan. Water is abundant, but labor is scarce.

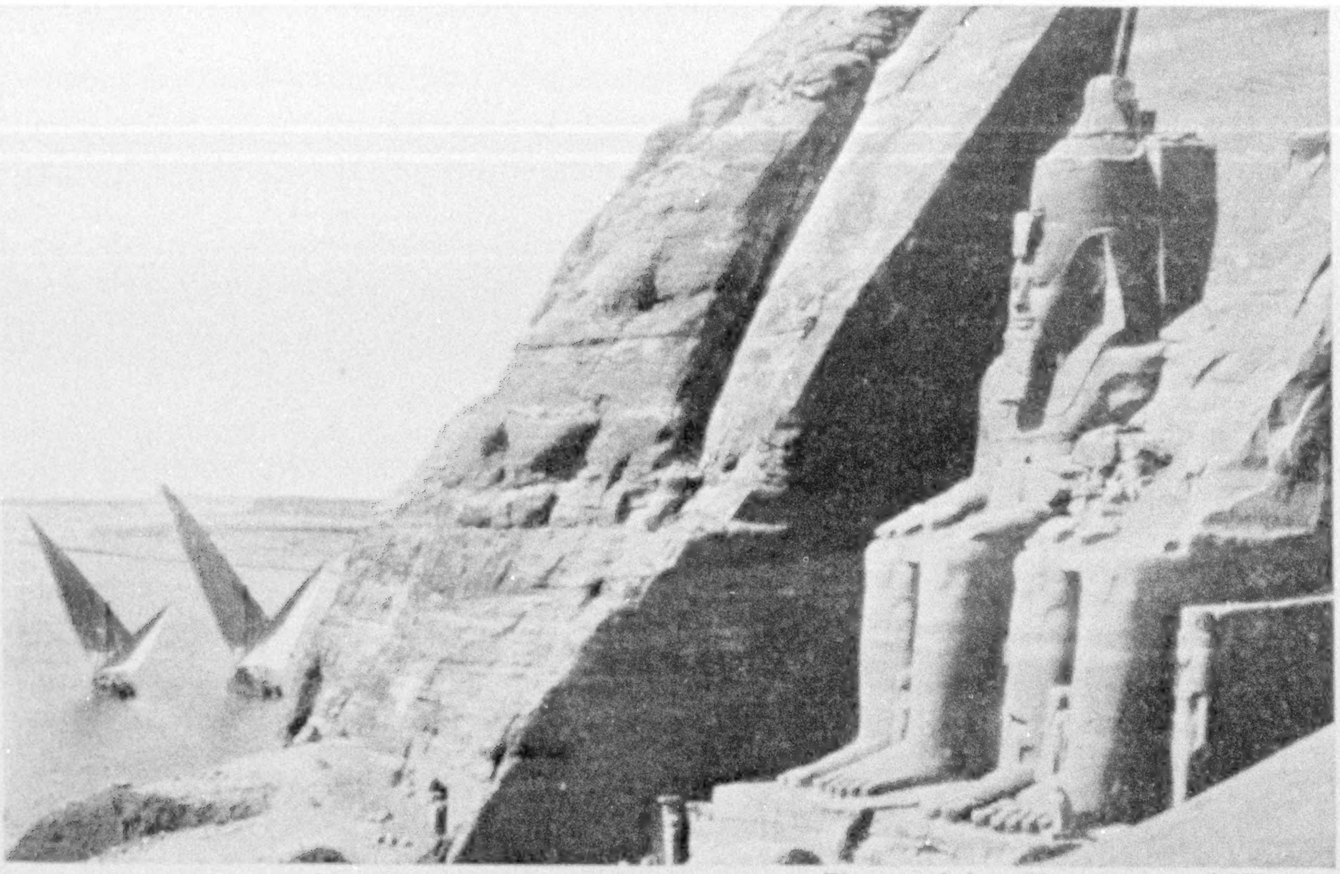
BRITISH ARE STRICT GUARDIANS OF THE SUDAN'S WILD GAME

If you want to bring a pet wart-hog or a giraffe home with you from the Anglo-Egyptian Sudan, you will first have to get a permit from the British authorities. They watch over the wild game to save it from exploitation for commercial purposes. The hunting of elephants and ostriches for ivory and feathers is strictly controlled; trade in skins and trophies is prohibited. The exportation of captive wild animals for display in zoos and parks is kept within reasonable limits.

Egypt depends mainly on the Sudan for its meat supply, and thousands of acres of land have been put under pump irrigation to provide food crops for Egypt, whose people, as one investigator said, cannot subsist on bank notes and cotton.

Slavery, once so common along the Upper Nile, has been largely put down, except, perhaps, in the remoter regions. The country is almost treeless, especially north of Khartum; the few trees found are mostly species of acacia, known locally as the *samr*.

South of Khartum, to about 12° north,



Photograph from Maynard Owen Williams

COLOSSI OF RAMESES II AT ABU SIMBEL: LOWER NUBIA

The façade of the rock temple of Abu Simbel faces the rising sun across the Nile, so that the earliest rays penetrate to the inner sanctuary. On each side of the entrance are two colossi of Rameses. The greatest of Egypt's rulers is here shown wearing the double crown of Upper and Lower Egypt.

narrow belts of *sunt* trees (another sort of acacia) line the banks of rivers. This sunt-wood is prized for boat-building, for tanning purposes, and is much used for fuel.

Farther south, on the White Nile, where there is more rain, forest growths increase, and over in the Blue Nile country the giant baobabs (*Adansonia digitata*) and the Sudan ebony (*Dalnergia melanoxylon*) are found. Another Sudan tree known to commerce is the African mahogany of the Bahr-el-Ghazal province. Fires, lit by natives on hunting trips or to clear land, have destroyed much good timber in the Sudan.

THE MYSTERY OF THE SOURCES OF THE NILE

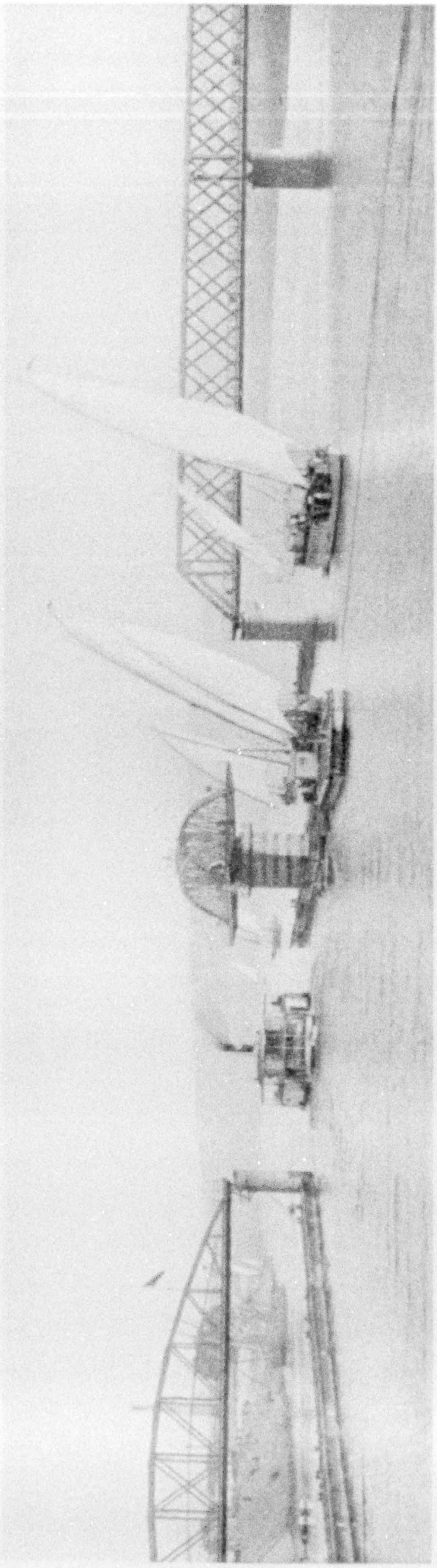
The Nile, of course, saves this region also from becoming an empty waste. Historic and important as this river is, its sources were for centuries shrouded in mystery. Early geographers advanced various odd theories; some said the Nile and the Ganges rose in the frozen mountains of north Asia, and other imaginative folk declared it came from "the Mountains of the Moon."

It was not till 1862 that Speke and Grant located the main source of the White Nile in what is now called Victoria Nyanza (Lake Victoria).

On its course through the Sudan the Nile is joined by the Bahr-el-Ghazal, the Sobat, the Blue Nile, and the Atbara. The Bahr-el-Ghazal flows out of the vast, mysterious sudd swamps of the west; the other three streams run down from the east, bringing the drainage from the Abyssinian hills.

In all Africa there is, perhaps, no greater natural curiosity than this famous sudd (Arabic for block), a sort of vast floating island of reeds, papyrus, and small plants in the marshes formed by the lower reaches of the Bahr-el-Jebel and Bahr-el-Ghazal.

British scientists have estimated the sudd area at 35,000 square miles. One writer says: "To the eye the effect is one of a vast extent of brilliant green papyrus, feathery reeds, and sword-grass, five to twelve feet above the water, broken by



Photograph by Edgar K. Frank

A BRIDGE IN THE LAND OF THE PHARAOHS

Egypt is a land of many ferries and few bridges. Only once above Cairo does the railway cross the Nile. Life follows the old systems which were in vogue before the days of the bridge, and even in Cairo, street-car and automobile traffic is tied up at certain places every day while the river traffic moves up or down the Nile. In the level, fertile delta the railways bear little relation to the winding branches of the great Egyptian river, but from Cairo to Aswan, a distance of 550 miles, the railway hugs the river as if in fear of the flanking sands. This bridge is a few miles from Qena.

occasional patches of light ambach trees, with channels of water, pools, and lagoons dotting the swamp-scape, and here and there a sparse tree or two on the horizon. . . . In the more southerly parts are found many varieties of game. . . . Of the larger species, elephant, giraffe, buffalo, and many sorts of antelope are seen, whilst the hippopotamus is excessively numerous. (The writer counted 72 in one lagoon at Shambe.) From the reeds and mudbanks arise clouds of wild-fowl—crane, geese, storks, herons, bustard, pelicans, spoonbill, ibis, and duck of every description."

In the rainy, stormy seasons (and when the rivers have risen) these floating islands frequently change positions; here and there areas become detached from the main body and travel about, driven by the winds, often blocking the river's channel as an ice-floe might do.

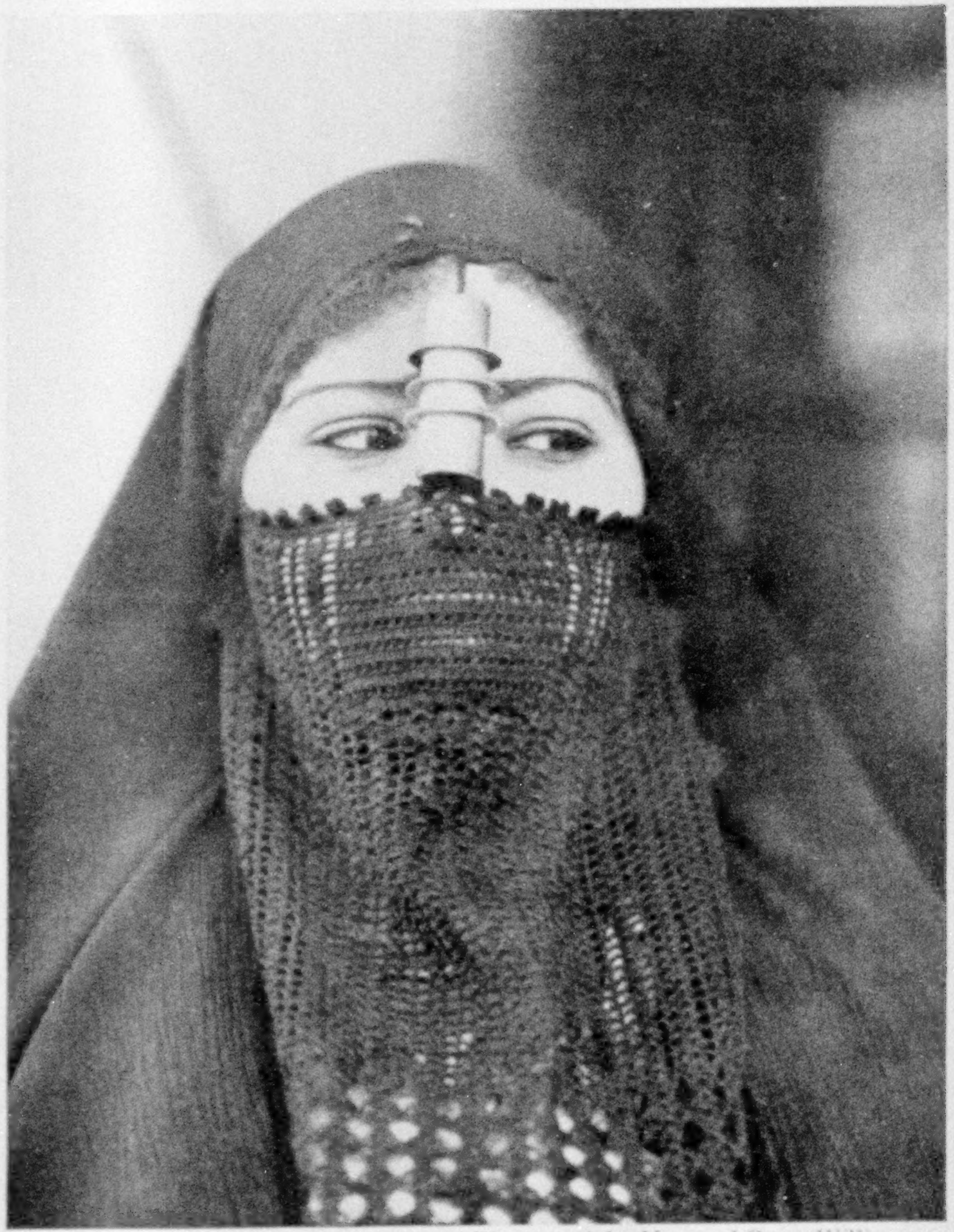
Lately, spurred on by the world's paper shortage, scientists have been giving attention to the vast papyrus accumulations in the sudd, with the hope of evolving some practicable method of paper manufacture.

THE ARAB IS THE CHIEF RACIAL FACTOR IN NORTHERN SUDAN

So mixed is the native population of the Nile banks in the Sudan that it has been aptly named the "Negro Potpourri," though some ethnologists contend that these blacks are not really negroes.

Probably the Nubians, geographically and physically, are the real link between Egypt and negro-land. Though Moslems for centuries, they have kept their own dialects.

The richness of the Nile Valley has, century after century, lured so many invaders into it that to-day a veritable babel of races and tongues is found here. Apparently, the Moslem religion



Photograph by Maynard Owen Williams

WHERE EYES ARE ELOQUENT AND CHINS ARE STILL

Egyptian women have lustrous eyes, the beauty of which is enhanced by the use of kohl, for darkening the lids. With the less attractive features of her face well covered, the Moslem woman allows her large, dark orbs to speak a language of their own.

Photograph from Kodak (Egypt), Ltd.

A WOMAN FROM THE SUDAN

Many of the older Sudanese negroes in Egypt were brought thither as slaves; but they are often treated more like members of the family than menials, and there are in Egypt thousands of these voluntary exiles from the land of the sudd.

appeals strangely to the wild tribes of north Africa, and millions have adopted it. Many are carelessly called Arabs because they are Moslems, or because they can speak Arabic, or because they wear a picturesque make-up of town Arab and Bedouin garments.

"Invasion, however, is not the only disturbing element," a British military report says. "The natives of the Sudan, even when they have adopted a more or less settled life, are great travelers; traffic in human flesh and conquest for the sake of human flesh have nowhere been pursued so long and so thoroughly. The native changes his abode without hesitation, and his love of strange women is passing Solomon's.

"The real Arab appears to dominate the northern part of the Sudan, from Egypt to Kordofan, though he has nowhere exterminated the original inhabitants; he has in many cases not yet succeeded in forcing his own language on them, but he has intermarried freely with them, and the resulting mixture calls itself Arabian. It is an old saying in Egypt that you can't tell a Turk of the third generation from a native of the Nile country."

The Sudan, say the Egyptians, is an integral part of Egypt; but it was conquered, misgoverned, and lost by successive khedives, and for years and years it was exploited by Egypt for ivory, gold, and slaves. Both socially and ethnologically, it differs from Egypt.

The Sudanese do not like the Egyptians; their only common tie is that both live on the waters of the Nile. Just now, too, the project of building the new Nile dams in the Sudan is arousing much excitement in Egypt, where the fellaheen fear that they may be robbed of some of their ancient irrigation rights. And water, at best, is not always too plentiful in Egypt.

By virtue of an agreement made back in 1899, Great Britain shares the protectorate over the Sudan with Egypt; but Englishmen actually govern the country.

It is a region, apparently, of vast agricultural possibilities. If present projects are carried out, the Sudan may one day grow as much cotton as Egypt itself.

EGYPT IS AHEAD OF TURKEY

Rejoicing now in her new freedom, and with the increase of agriculture and the growth of irrigation works and railways along the Nile, Egypt is gradually assuming a more prominent place in the affairs of the world. Her new government, steered by Europeanized Egyptians, adds another non-Christian unit to the family of nations. Her long French and British tutelage undoubtedly leaves her better equipped for self-rule than either Persia or Turkey.

In education, as well as in railways, irrigation works, newspapers, and law courts, Egypt is and will be far in advance of Turkey; yet she must still lack the force and security for progress which Christianity brings. Lord Cromer once said: "The de-moslemized Moslem, although he is wholly unaware of the defect, is inferior in one respect wherein his inferiority cannot be removed by a stroke of the pen; for the civilized European, as we understand him, although he may not be an orthodox Christian, is, in spite of himself, to a great extent the outcome of Christianity and would not be what he is had he not 1900 years of Christianity behind him."

In Cairo and London, men think mainly of politics and agriculture when Egypt's affairs are mentioned. To most Americans, however, the name Egypt still means the home of the Sphinx and the whirling dervish, the land of the mummy and the scarab, a desert realm of camels and white-robed sheiks, where long ago the troubles of the Children of Israel first began.

And yet—you who know Egypt, you who have come under the spell of the Nile—you can forgive that Frenchman who wept when he saw the Pyramids!

THE LAND OF THE FREE IN AFRICA

By Harry A. McBride

Author of "The Land of the Basques," in the National Geographic Magazine

A SHORT while ago, on November 15, 1921, to be more explicit, there occurred at the Navy Yard at Charlestown, Massachusetts, an incident of note. The commanding officer and his staff, in full-dress uniforms, stood at the left of the main gate of the yard. At the right a company of marines stood at attention. An automobile arrived and discharged its passengers, who greeted the commanding officer. The marines came to "present arms," while the Navy band played a national anthem, beautiful and full of swing, yet an anthem very unfamiliar to American ears. Its title was "Hail Liberia."

Half an hour later, with the distinguished guests aboard, the United States cruiser *Denver* loosed its moorings, glided away from the pier out into midstream, and turned its bow Atlantic-ward. Its duty was to carry back to his country, in far-away Africa, the chief executive of the Liberian Republic, and at the same time to bear messages of good-will from this government to that small copy of our own institutions which the world knows as "Liberia."

President Charles Dunbar Burgess King had been in this country for several months, appointed to bring in person to the notice of Uncle Sam the appeal of Liberia for financial assistance. Liberia did not come begging with empty hands, but proposed, as security for a credit of $5,000,000, to pledge all her revenues, which in themselves are more than ample assurance of repayment.

AMERICA RESPONDS TO LIBERIA'S APPEAL

The appeal was not altogether in vain. The United States recognized the necessity, which arose because of Liberia's participation in the World War and has requested Congress to authorize the establishment in favor of Liberia of a credit of $5,000,000, secured by proper safeguards.

The Liberian plan is to use this money principally for opening up what has always been considered potentially one of the richest corners of Africa, and no one knows what hidden natural wealth will be discovered when motor roads are blazed through its jungle lands and palm forests. To-day there are no civilized settlements more than twenty-five miles inland from the coast; the vast interior is a blank, both to Liberians and to the outside world.

Immense palm forests are known to exist—greater, perhaps, in productivity than those of Nigeria and the Belgian Congo—and if no other object is attained than bringing these within reach of the needs of present-day civilization, Liberia's prosperity will be doubled and her name will jump from a bottom rung to a much higher place on the ladder of commercial nations.

PROBABLE MINERAL RESOURCES OF THE COUNTRY

Inasmuch as Liberia's neighbors, colonies of European powers, explored and developed with money from the coffers of the mother countries, have been found to be rich in gold, tin, coal, and other essential products, why not Liberia also? President King's visit, among other things, was for the purpose of having an American expert mineralogist sent to Liberia to make explorations for the government.

One day, in conversation upon the subject at the Department of State, he said:

"We want to know what we have in our country. For example, I think we have gold. I have a sample of what is believed to be gold, picked up in a certain locality in Liberia."

Putting his hand in his pocket he laid on the American official's desk a rough nugget larger than a chicken's egg, which was found to be gold of marked fineness.

One day in Liberia, while speaking to a Liberian, I also remember noticing that he was wearing a large and very beautiful diamond scarfpin made from a rough stone which was picked up in Liberia's hinterland and was sent to London to be passed upon by experts. The stone was

THE MARKET PLACE OF MONROVIA

Looking down Water Street, Monrovia's principal business thoroughfare—a picturesque place on steamer days, with its crowds of natives in bright cotton prints.

Phelps-Stokes Fund Photographs

LIBERIA COLLEGE

The college has a good location, on a hill overlooking Monrovia on one side and the South Atlantic on the other. Photograph made in connection with a tour of the African Education Commission.

Phelps-Stokes Fund Photograph

THE EXECUTIVE MANSION AT MONROVIA

The official residence of the President of Liberia, like our White House, has an "East Room."

found to be a perfect "blue-white" specimen. It would appear, therefore, that Liberia is in the position of a multimillionaire owning block after block of property on Broadway, but who finds himself in need of borrowing the necessary capital to develop it.

That the Republic should first come to America for aid is not unnatural. Nowhere in the world can there be found a foreign country so like the United States in history, language, customs, and form of government. After traveling up the West African coast, touching at ports in British, French, Belgian, and Portuguese colonies, all of which are decidedly foreign, distinctly West African, and altogether "far-away" and different in character, most Americans experience, when the slow West Coast steamer turns its nose into Monrovia Bay (see Map of Africa, B-8, issued as a supplement with this number of THE GEOGRAPHIC), a feeling of being much nearer home than the 4,000 miles which actually separates him from the nearest American ports.

The steamer, cautiously approaching the shore, finally drops anchor and awaits a brave little surfboat, pulled by twenty stalwart natives in white duck uniforms, at first a tiny speck in the huge waves churning so threateningly over the dangerous bar. This feeling of interest is intensified when the boat approaches nearer and a flag is made out at its stern, so like the Stars and Stripes as to be readily mistaken for it. The Liberian emblem, however, has only eleven stripes and one lone star.

Next the customs officer approaches—his English is decidedly American in accent—and demands that each passenger landing in Liberia prove that he has $100 in his possession. This requirement safeguards the little Republic from having to care for public charges. And he doesn't speak of pounds, francs, or pesetas, either; he says, in plain American, "one hundred dollars"—another link with home, the only place in Africa where the currency is the same as ours!

LIBERIA'S CAPITAL NAMED FOR PRESIDENT MONROE

Monrovia, the capital, named for an illustrious American President, is the

THE PLAYGROUND OF THE KRU

The Krus, who mainly occupy the Liberian littoral between Grand Bassa and Cape Palmas, love the water. They are sailor and fisher folk, and from early youth Kru boys spend most of their lives either in or on the water. They venture miles from shore in tiny fishing canoes.

Photographs from Harry A. McBride

KRU-TOWN, A NATIVE SECTION OF MONROVIA

Monrovia proper is built up the slopes of a hill (in the right foreground). Kru-town, where some three thousand Krus dwell, is on the sandy point which juts out into the bay. It supplies many deck hands and winch boys for handling the cargoes of West Coast steamers.

largest town in the Republic, and I should say that few cities in the world have a harbor so picturesque.

Nature seems to have lavished great care on this out-of-the-way tropical stopping place. Monrovia Bay is about seven miles wide, and vessels enter the harbor in the center, with Cape Mount far off toward the left and Monrovia Point, high and rocky, on the right. Between the Cape and the Point is the oval background of sandy beach and majestic palms.

Some two miles from the Point, Mesurado River empties into the Bay with a corkscrew turn around the sand-bar with which it has obstructed its own free entrance into the Atlantic. Just back of the bar, the town itself nestles peacefully on the hill rising from the river bank, with its white roofs emerging from unsurpassed tropical verdure.

Photograph from Herbert Halloway

CANOES AT MONROVIA, CAPITAL OF LIBERIA

Kru boys paddle a mile out to sea in round-bottom dugout canoes to the side of an incoming steamer. They will dive for pennies with little urging.

Because of the bar, steamers are forced to anchor a mile or more from the shore, while passengers and freight are landed in surfboats.

Often this landing is an exciting experience, and the passenger always marvels at the canny judgment of the native "headman" in choosing the wave that will be the longest and safest to "ride in on." Sometimes his twenty oarsmen will wait a quarter of an hour just beyond the powerful surf, then a wave mountain high will be seen racing in from the sea; the brawny native Krumen, clad only in loin-cloths, lift their oars and brace their bare feet against the cross-board in front of them.

The boat rises on the incoming mountain of water, the headman gives a shrill cry, and the men pull for their lives to keep the boat balanced on the churning crest. Spray flies on every side, and to the uninitiated this is apparently their last moment on earth, as the slender boat shoots, at terrific pace and at some horrible angles, over the bar.

But soon the waters become more quiet, the pace slackens, and the boat is pulled along on even keel again, perspiration glistening on the muscular brown backs of the crew.

Up and across the Mesurado River, they go past pretty little Providence Island, with

Photograph from Harry A. McBride

"JESSANDREW"

A well-known native eccentric often seen on the streets of Monrovia—a most happy individual, despite the fact that he is deaf and dumb.

its one immense baobab tree towering over a cluster of mud huts, to the Monrovia landing, half a mile from the bar. It is possible that the harrowing experience of crossing the bar has something to do with making Monrovia look so charmingly inviting.

The landing is disappointing. The wharf is small and untidy and the main business street along the waterfront—Water Street—is none too wide, none too straight, none too well paved, and none too clean.

The business premises, most of the more pretentious kept by British, French, and Dutch firms, are poor, with the first floor usually built of cement and the roof of corrugated iron. Water Street could, however, easily be made to compare more favorably with the main business centers of Freetown or Dakar.

RESIDENTIAL SECTION BUILT IN AMERICAN COLONIAL STYLE

Climbing the hill, two or three blocks, one comes to Ashman Street, the chief residential thoroughfare, which is very pleasing in aspect. The Executive Mansion, the foreign legations and consulates, the War Department Building, and the Representatives Hall lend to its importance. On this street are also several of the best residences, well constructed of brick, after the fashion of American houses of the Colonial days, with columns along the front.

The Executive Mansion is a large, white, three-story structure—and it has its "East Room."

In the reception-room are portraits of some of Liberia's presidents and the framed photograph of one foreigner. This foreigner—a hero in Liberian history—is Captain Frank H. Schofield, of the United States Navy, who, while in command of an American cruiser, quelled a native uprising on the coast a few years ago. He also landed a supply of rifles to enable the Liberian Frontier Force, a well-trained tiny army of 800 native soldiers, to keep the peace thereafter.

In Liberia, army rifles have ever since been called "Schofield rifles," and the government forms of the War Department list so many "Schofields" as being in the possession of each company.

Liberia occupies that corner of West

Africa which juts out into the Atlantic as if in an endeavor to reach across to the Brazilian shore, on the South American Continent. Only a few years ago the maps showed it to comprise a large area, extending northeastward almost to the Sahara; but the geographers themselves were unable to place definite heavy lines for Liberia's interior frontiers.

Then came the dreams of African empires by European nations, and little by little the area accredited by the map-makers to the weak little Republic has dwindled until to-day its coastline is only 360 miles in length and its frontier farthest in the interior is only 200 miles from the seacoast. Its present area, about equal to that of the State of Ohio, is one-third what the Liberians originally claimed, and their claims were probably as good as those of many of the powers which undertook the colonizing of the Dark Continent.

LIBERIAN COLONIZATION MOVEMENT BEGUN IN 1816 FOR FREED AMERICAN SLAVES

Here and there along the coast the original settlers—negro freedmen from the United States—founded little towns and settlements. They were sent from America back to the lands of their ancestors by the American Colonization Society, in which such men as President Monroe, Henry Clay, and others were interested. This movement began in 1816, and the first vessels, sailing schooners chartered by the American Government, set forth from New York in 1820-23.

Many of the first settlers succumbed to African fevers; others were killed by hostile natives. Indeed, the early efforts of these civilized Americo-Liberians to establish themselves on the African coast were not unlike those of the early colonists at Jamestown and the seekers of new homes who landed at Plymouth Rock. Finally they acquired right to certain lands by purchase from native chiefs.

How many strings of beads were paid to the American Indians for Manhattan Island? Either the purchasers of the first Liberian settlement were more liberal or the natives had better business heads. They charged and were paid quite a price—six muskets, one small barrel of

Photograph from French Colonial Office

A YOUNG BAOULE GOING AFTER WATER

He is a native of the French Ivory Coast, which lies to the east between Liberia and the British Gold Coast.

Photograph by T. C. Mitchell

IN LIBERIA'S INTERIOR, HIGH, HILLY, AND HEALTHFUL

This photograph shows the quarters of the Interior Commissioner at Zinta, not far from the frontier of French Guinea.

Photograph from Harry A. McBride

A LIBERIAN NATIVE TOWN, SET IN A SMALL CLEARING OF "BIG BUSH"

The roofs of the huts are of palm-frond thatch and the walls are of daubed mud.

A WEST COAST VILLAGE ON THE SEA, IN THE SHADE OF COCONUT PALMS

Photographs from Harry A. McBride

AFRICAN NATIVES WITH THEIR CHILDREN

In the foreground are two large calabashes used by natives for holding their drinking water.

Photographs by T. J. Alldridge

NATIVE CARRIERS WALKING SINGLE FILE THROUGH THE BUSH

Such caravans as the one shown above brought rice to Monrovia during the World War from 100 miles inland (see text, page 430).

PALM-LEAF HAMPERS USED FOR OVERLAND TRANSPORT

Though frail in appearance, these hampers are extremely strong. An average load weighs from 56 to 65 pounds.

Photograph from Harry A. McBride

BASSA BELLES "EN FÊTE"

When fête days arrive in West Africa, the natives decorate themselves instead of hanging flags and bunting from their houses. Skins are marked with lines of white clay, bushels of beads are hung on necks and shoulders, yards of anklets are taken from the "jewel chests," and strings of gold and silver coins are used as hair ornaments.

Photograph by T. J. Alldridge

A NATIVE "YENKETTI" OR SUSPENSION BRIDGE

These suspension bridges are frequently encountered by the traveler in the hinterland of Liberia and Sierra Leone. The ropes are made of fibers and the structures swing over the rivers from branches of trees.

powder, six iron bars, ten iron pots, one barrel of beads, two casks of tobacco, twelve knives, twelve forks and twelve spoons, one small barrel of nails, one box of tobacco pipes, three looking-glasses, four umbrellas, three walking-sticks, one box of soap, one barrel of rum, four hats, three pairs of shoes, six pieces of blue baft, and three pieces of white calico!

All the above was given "cash down" in part payment, but the native kings agreed to give credit for the following, which were to be paid by the colonizers when they could: Six iron bars, twelve guns (probably long Danes), three barrels of powder, twelve plates, twelve barrels of ships' biscuit, twelve glass decanters, twelve wineglasses, and forty pairs of boots.

LIBERIA HAS AMERICAN FORM OF GOVERNMENT

In 1847 the little settlements along the coast united to form the Republic of Liberia, and published to the world two documents—their Declaration of Independence and Constitution—both of which take the form of their prototypes in American history.

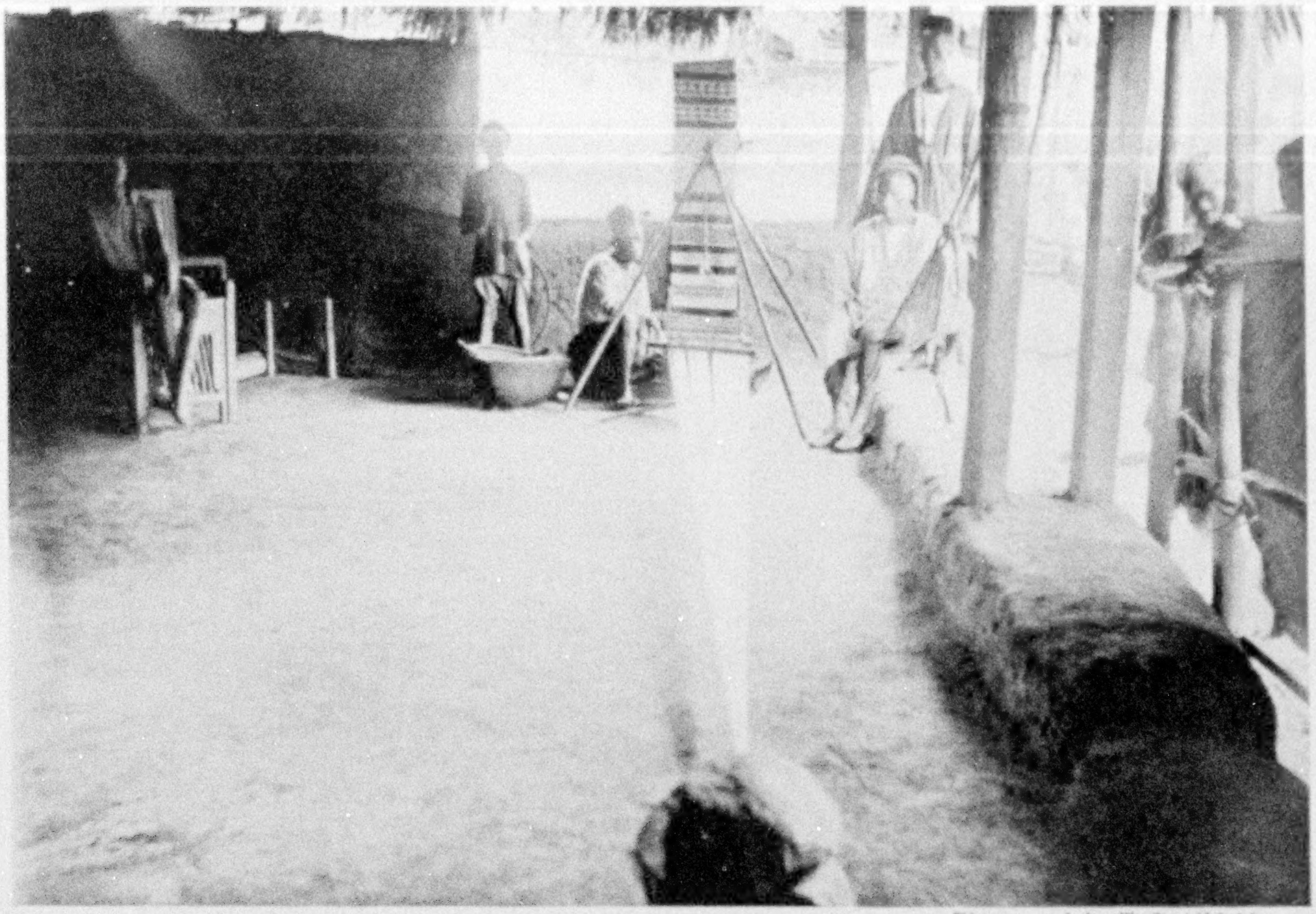
Joseph Jenkins Roberts was elected the first president of the Republic. He was a man of superior talents, and the first administration, though encountering innumerable difficulties, was conspicuously successful. At that time there were two political parties in Liberia—the Whigs and Republicans.

Roberts' successor, Stephen A. Benson, was elected in 1856. The first president was a mulatto, so light in color as to be readily mistaken for a white man. Benson, however, was quite black. An amusing incident at the time of the election of Benson is quoted by Professor Frederick Starr in his excellent and authentic work, "Liberia," which is to-day used as a textbook in Liberian schools.

A certain Captain White, of Virginia, met in Monrovia an old negro and former slave, whom he had known in America. The Captain asked:

"Which of the candidates for the presidency are you going to vote for?"

"Oh, Benson," replied the negro.



Photograph by T. J. Alldridge

A NATIVE INDUSTRY FAST LOSING GROUND IN LIBERIA

Formerly Liberian women wove much fine cloth from cotton that had been treated with native vegetable dyes. Cheap, bright-colored cotton prints from Manchester are gradually replacing the finer, heavier native cloths.

"Has not Roberts made you a good president?"

"Yessah," said the former slave.

"He is a very smart man," Captain White urged, "and much respected abroad; I think you had better vote for him."

"That's all true, but the fac's just this, Massa White: The folks say as how us darkies ain't fitten to take care o' oursel's—ain't capable. Roberts is a very fine gentleman, but he's more white than black; but Benson, he's colored people all over."

There are to-day less than fifteen thousand of the descendants of the original colonizers. These are the Americo-Liberians, who carry on the affairs of the Republic, control much of the commerce, and attend to the few existing industries. They have, in turn, civilized and given a certain amount of education to about 100,000 of the coastal natives. In addition to these, Liberia's population is composed of some 1,500,000 uncivilized natives who inhabit the interior regions.

Never have the Americo-Liberians penetrated far inland. Their towns are along the seacoast, and for 15 or 25 miles up the principal rivers their settlements and farms are found.

Monrovia, the capital, has a population of about 4,000. Grand Bassa and Cape Palmas rank next in order. Then come the smaller villages, and how interesting to Americans are their names: New York, Philadelphia, Virginia, New Georgia, Marshall, Bunker Hill, Hartford! But they are like American localities only in name.

Some 20 miles up the St. Paul River from Monrovia, the one motor-boat, if it happens to be running properly that day, turns sharply to the left, toward the landing place of New York.

It might be said that New York, Africa, and New York, America, form the two extremes in human habitats. At the latter, one lands from a 50,000-ton liner upon a wonderful two-story pier of reinforced concrete, and is cast ashore into the canyons between skyscrapers, into the

Photograph by T. C. Mitchell

A MOTHER OF THE BUZI TRIBE AT ZINTA

She is hanging out the weekly wash, unimpeded in her labors by her conveniently placed babe.

noisy turmoil of its 6,000,000 people. At the former, one steps carefully from the one-ton, antiquated motor-launch on to the dubious-looking single landing plank and springs ashore into the mud.

There are three cottages in view, built upon supports of bricks, which might be called bungalows if they were more carefully constructed. But New York, Africa, also has its skyscrapers—two immense cottonwood trees. It also has its turmoil—the deafening croaking of hundreds of bullfrogs.

The Liberian farmers devote themselves to coffee-growing, their product being popular in Germany and the Scandinavian countries. The bean is large and the coffee is excellent, though very strong.

Palm oil, which all Europe finds indispensable in its soap manufactories, in glycerine production, and in other industries, and the demand for which is rapidly growing in the United States, is produced by the natives and forms a remunerative export, which could be vastly increased if means of transportation from the great palm forests were made available.

Piassaba is the third product of importance—a strong palm fiber from which the brushes for rotary street-sweepers are made.

ROADS TO THE INTERIOR ARE ESSENTIAL TO LIBERIAN PROSPERITY

None of these exports can be increased appreciably until the interior regions are tapped. There is only one way to accomplish this and to add to Liberian products such material wealth as may be found hidden in its jungles.

The vital need is roads. To-day the only way of sending a bundle of palm nuts from Kolahun, on the northern boundary of Liberia, to the coast is on the head of a naked native. He will walk for days on narrow native paths, wandering in all directions, wading streams, covering 300 miles, whereas a straight road 200 miles in length is what is needed, with motor-trucks to deliver produce from the northern boundary on the piers at Monrovia in 24 hours. And that is why the Liberians were so desirous of borrowing money.

The enthusiasm for road-building already exists. Two years ago, when the writer was residing in Liberia, the "road talk" began. Monrovia, however, was a difficult locality from which to start a thoroughfare into the interior, because it is built on a high point overlooking the Atlantic and is surrounded on three sides by the ocean and the wide rivers flowing into it.

The only direct way would be to build a bridge over three wide rivers; and such

a bridge would have to be as long as the Brooklyn Bridge. One hundred dollars, due to the adverse financial situation caused by the war, represented the total sum available for road-building at that time, and it was decided that this would fall somewhat short of the cost of construction of a second Brooklyn Bridge.

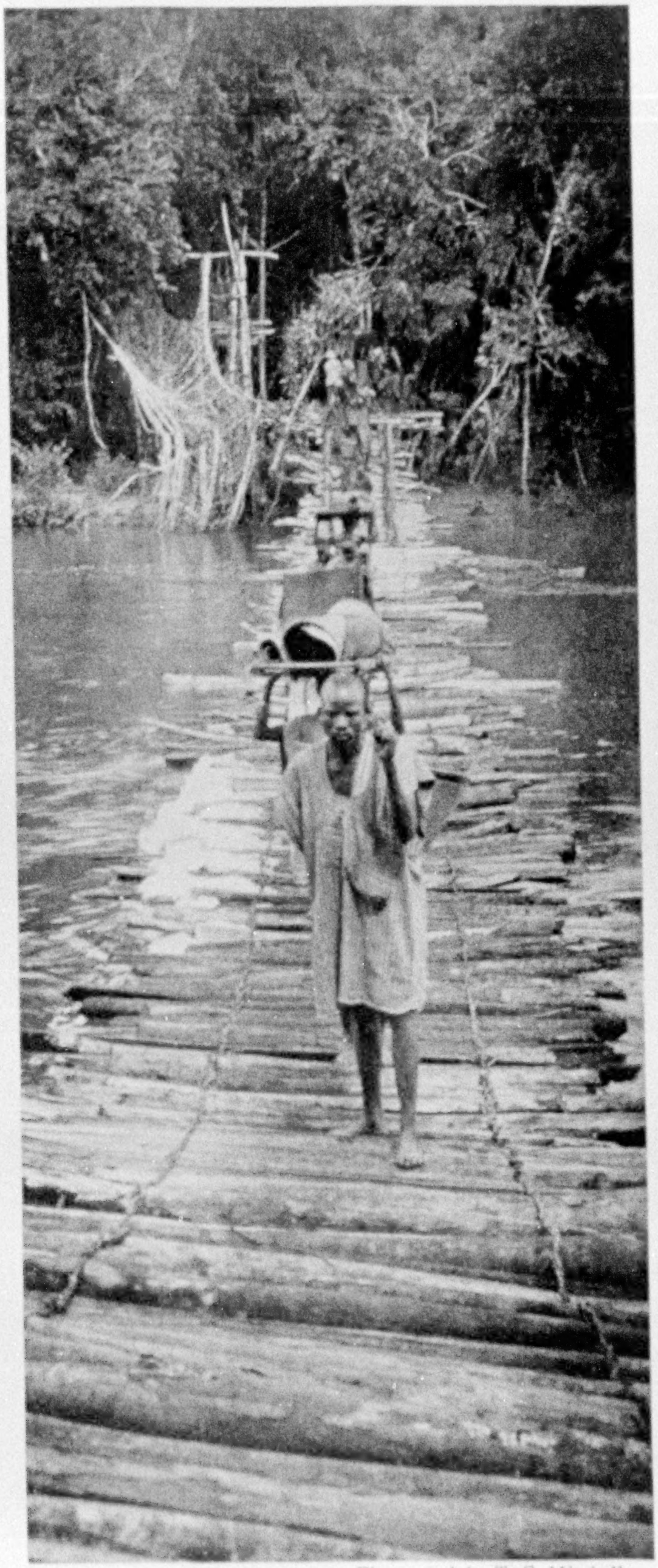
JUNGLE ROADS BUILT UNDER DIFFICULTIES

Extending for 15 miles along the Atlantic was a strip of land densely covered with jungle growth and paralleled by a river which degenerated here and there into mangrove swamps. At the end of this river is a town called Paynesville.

Now, the problem was to get a road to this town by hook or crook, because, once there, a good motor-road could be readily constructed into the interior. Nothing daunted by the appalling lack of funds, the Liberian Government decided to make a start at least. Two or three British and Dutch merchants volunteered to lend a dozen axes and shovels, and a British firm also lent the most important factor—a small American automobile.

At the time, forty prisoners were idling their time away and eating immense quantities of costly rice. The axes and shovels were placed in their hands and they were told to cut a straight path 21 feet wide through the jungle. Some one made a nice guess as to the direction this path should take, and a fortunate one, because it just skipped the swamp land on the north and a lagoon on the south.

The only way to tackle the problem was by guesswork, because the jungle was so thick that none could tell, in the absence of skilled engineers, what lay ahead until the great trees and undergrowth were chopped away. Huge boulders of rock would come to light,



Photograph by T. C. Mitchell

BRIDGE OVER THE ST. PAUL RIVER

This is another type of bridge constructed by natives in northern Liberia—logs tied together with native ropes and floated on the water's surface.

Photograph by T. J. Alldridge

ASCENDING AN OIL PALM TO CUT DOWN THE CONES OF THE PALM NUTS

The oil palm is probably Liberia's greatest natural resource. Forests of this tree are extensive along the coast and in the northern hinterland. Palm oil is used in enormous quantities in Europe and the United States in the manufacture of soap and in the tin-plate industry. It is also an important article of food among West African native tribes, "palm-oil chop" being one of the few native dishes which have been adopted by European and American residents.

often in the exact center of the roadway. No tackle, chains, or tractors were available; so great fires were built in trenches dug around the rocks, heating the stone until it cracked and, piece by piece, could be removed.

A four-mile stretch of soft sand was encountered, which had to be given a covering of gravel and clay; but no wheeled vehicles were on hand, not even a wheelbarrow. The merchants again came to the assistance of the road workers and contributed 40 empty kerosene boxes about the size of a bushel basket. The next day a line of 40 natives commenced to move from the gravel and clay pits toward the sandy stretch, each with a bushel box of heavy earth on his woolly head.

At the end of three months the roadway, over which an automobile could pass in a not too uncomfortable manner, was 12 miles long and only three miles from its objective, Paynesville.

A Kru boy chopped down another towering palm tree, a Bassa man felled another; then the Kru boy crawled through the tangled undergrowth to get at the next one, but his jaw dropped and he muttered the Bassa word for "damn." There was no tree, but the right of way in front of him took a sudden drop, and the bottom thereof was a deep, swift little river, and the Kru boy knew that that "puck-a-puck wagon," the automobile, could not swim. It looked as if the road would end right there.

SPIRIT OF PROGRESS DISPLAYED IN ROAD-BUILDING

But the Liberians were determined that the road should reach Paynesville. A search was made and under an old customs building were found six I-beams, each fully twenty feet long. They were very old and rusty, but still serviceable.

The beams were carried the 12 miles, each on the heads of 10 natives. The British merchant also made a search and found a barrel of cement in fair condition. The "puck-a-puck wagon" carried it to the scene of operations. Rocks were cut, and in a few days a solid little bridge spanned the stream.

Another month and Paynesville turned out en masse to welcome the entry of the first automobile that had ever spilled oil on its earthen streets, and, as a matter of fact, of the first wheeled vehicle of any sort that had ventured thither from anywhere.

The road had cost $75 for rice for the laborers, plus $15 for the services of a mason for bridge-work. A half dozen motor-trucks employed thereon for a few weeks would make it a fine motor-road.

I mention this only to show that the Liberians have come to that point where they are determined to develop their country. The natives in the interior have also come to understand the need for roads, and native chiefs have constructed little bits of roadway here and there between their towns, having no other tools for this work than sharpened sticks.

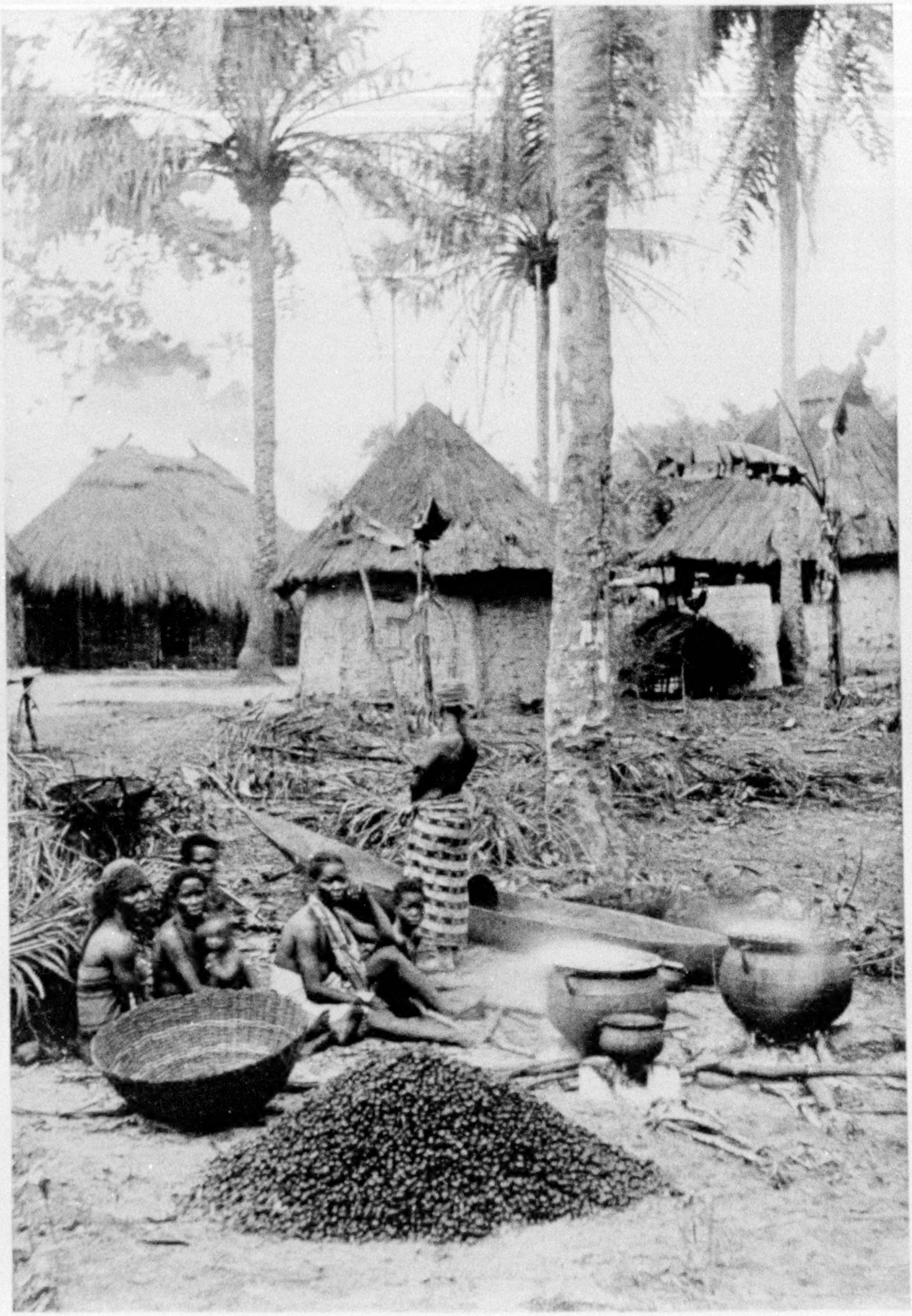
LIBERIA'S COMMERCE DESTROYED BY WORLD WAR

Liberia, it must be remembered, though having no personal grudge against Germany, entered the World War with the Allies. The German traders were expelled, and this caused a great decrease in trade. Next, the submarine campaign in the North Atlantic became so fierce as to cause the withdrawal of many West African steamers. And this is what the war did to Liberian commerce: In 1913, 1,322 vessels, with a tonnage of 2,690,178 tons, entered and cleared at Liberian ports; in 1918 the number of vessels was 127, with a tonnage of 333,926!

Also, in 1913, almost half a million dollars were collected in customs revenues, and in 1918, $165,999. At that rate, there was very little chance for progress.

Not only in trade did the war cause Liberia to suffer, but Germany sent a submarine far from the beaten paths to bring home to Liberians the stern realities of war. Monrovia was bombarded, Liberia's only remaining seagoing vessel sunk, lives lost, and property ruined. As a matter of fact, had it not been for the war, Liberia would not be in its present position of financial need, but would be more than able to carry on by herself the work of development which is so greatly desired.

Although the Americo-Liberians barely hold their own in the matter of increasing population, the million and more natives are flourishing and gaining in numbers.



Photograph by T. J. Alldridge

NATIVE WOMEN EXPRESSING PALM OIL BY BOILING THE NUTS IN CAULDRONS

This method produces the clearest oil, but many natives use the easier method of storing the palm nuts in a hole in the ground and waiting until the oil leaves the nut by decomposition of the pericarp.

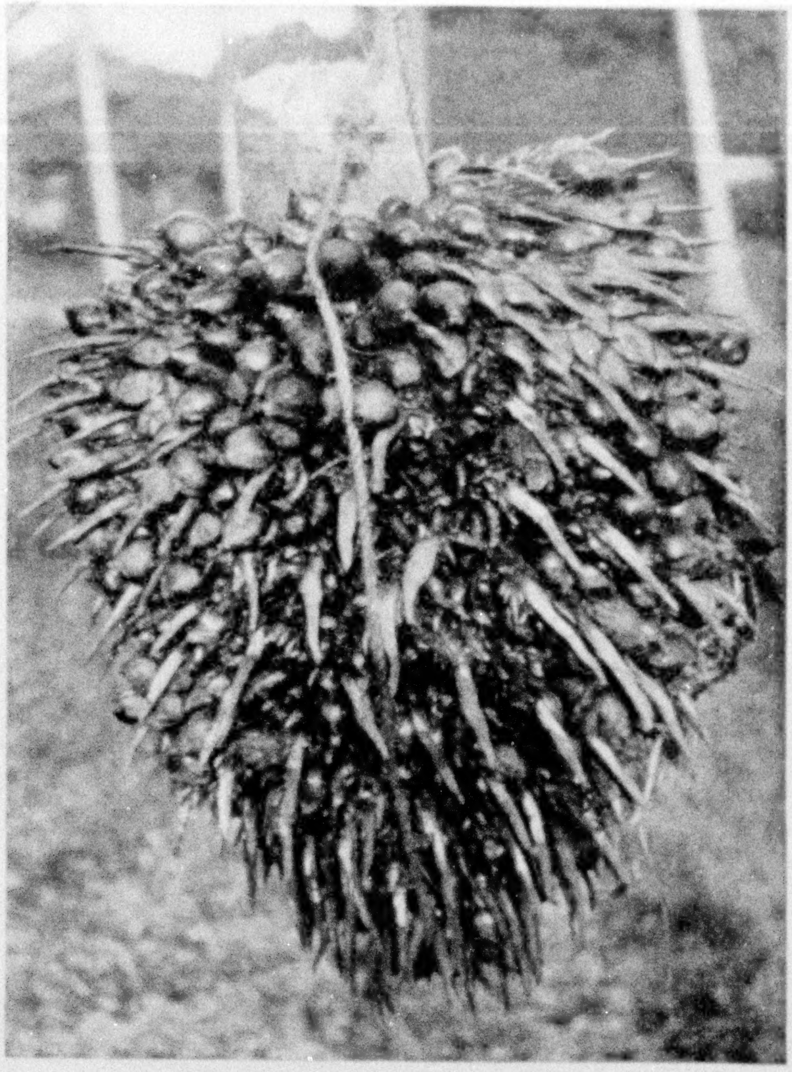
These natives of Liberia may be roughly divided into the three principal races—the Mandingos, the Krus, and the Kpwesis.

THE VAI ARE HIGH TYPE NATIVES

The foremost tribe of the Mandingo race is the Vai, inhabiting the eastern part of Liberia. The Vai are lighter in color than the other natives, are proud, aggressive, and very industrious; their industries, as a matter of fact, render them practically independent of their neighbors. Their religion is Mohammedan, brought down indirectly from the Arabs in the north; their boys are taught to read Arabic and the Koran.

Vai villages are models of cleanliness, the little streets of beaten earth being swept daily; and their homes are so pretentious for native Africans that the word "hut" is scarcely applicable to them. Bamboo frames about seven feet high are first erected and then plastered with clay-like mud to a thickness of about twelve inches, the outer coat being flung onto the building by hand, so that it resembles stucco.

The pointed circular roof is of neatly thatched grass and palm fiber. There is one door in the front and, often, several windows—an unusual feature in native architecture.



Photograph by T. J. Alldridge

AN OIL PALM CONE

This cone of fresh fruit, cut from under the fronds at the crown of the oil palm, weighs 56 pounds and contains 1,445 serviceable oil palm nuts. The core of the cone is used by the natives in preparing a powerful black soap.

The Vai weave a very heavy cotton cloth, beautifully colored by native dyes, usually in stripes and geometrical designs. From this cloth they make long, loose robes of dark blue, which constitute the principal article of attire of the Vai men and correspond to the loose white robes worn by their Arab brothers farther north.

THE KRUS ARE THE CHIEF TRAVELERS OF AFRICA

From the cloth they also make attractively colored and comfortable hammocks in which they sleep, whereas most other natives sleep on reed mats spread upon the ground.

The Vai is intellectually clever to a marked degree, and has one of the few written languages in native Africa, the syllabary of which, slightly resembling Arabic in appearance, is so complete as to make it an interesting study for the visitor.

The Krus inhabit the coastal regions from Monrovia as far east as Cape Palmas. They are decidedly different from the Vai peoples, being darker in color and not so tall in stature. They are willing workers and constitute a valuable asset to Liberia at the present time, when so much labor is needed for development of all kinds.

For ages the Kru has been the laborer of the coast, but his chief occupation has been that of sailor and fisherman. He is the most traveled of all the Africans; every steamer plying along the West

Coast touches first at a Liberian port to take on a hundred or so Kru boys.

These sturdy fellows take charge of loading and unloading all the cargo at the little ports down the coast as far as Loanda, and are then brought back to Liberia, paid off, and sent ashore to await the next southward-bound vessel. This practice has been found necessary because of the impossibility of white crews "working" the cargo in the terrific tropical heat.

PHONOGRAPHS AND SEWING-MACHINES IN KRU HUTS

The purser in signing the Kru boys on the ship's articles gives them names which he can spell and pronounce. Generally the Kru boy is very proud of his sailor name, using it forever after. Thus one should not be surprised to find a Kru seaman bearing the appellation Bill Tobacco, Bottle Beer, Fifteen Cents, or perhaps Soap Box.

One of the largest Kru villages is Krutown, on the riverside near Monrovia, where some three thousand of these sailor folk and their families live. Due to their industrious ways, they, of course, have more money than other natives, and hence their huts often boast phonographs and sewing-machines, and their attire includes several, if not all, of the necessary articles of European dress. The Kru seaman insists, however, upon wearing the European shirt outside the trousers.

Kru homes are built by erecting four posts, one at each corner, and fastening between them large mats woven of bamboo splits. Grass and palm branches form the roof, and there is a small entryway at one corner, but usually no window. The village is always gay and happy with native dances going on to the thumping of tom-toms in the rear of the huts.

THE KPWESIS ARE LIBERIA'S BUSHMEN

Another trait of the Krus is patriotism, their love of country being so great as to render almost fruitless efforts to induce these valuable laborers to settle and remain in neighboring British and French colonies.

The third element, the Kpwesis, and kindred pagan tribes of the interior, of which the most important branches are the Zawquellis and Buzis, are still primitive "bushmen." They are slender, wiry, very black in color, and of a low order of intelligence, having petty jealousies, which frequently lead to internecine warfare.

They live in small villages, usually of only fifteen to thirty huts, and raise sufficient rice, sweet potatoes, and cassava for food. Each male has as many wives as he is able to buy, and the wives do most of the work.

Yet these are the tribes that inhabit the regions where lies Liberia's natural wealth; they are the ones who must be brought into contact with the coastal tribes and who must be taught to produce and to supply the palm nuts, palm kernels, palm oil, ivory, piassaba, rubber, and other articles of trade.

They are not entirely unwilling to assist the government. During the last year of the war, when steamers from Europe were few and far between, there was a great scarcity of rice for feeding the frontier force.

The price of the imported article was twelve cents per pound—more than the government could afford to pay. Word was sent far into the interior to a certain Kpwesis chief. He answered the call by sending a caravan of two hundred of his tribesmen to Monrovia—a distance of 100 miles—on foot, every man carrying on his head a parcel of 56 pounds of native rice carefully packed in palm-leaf hampers.

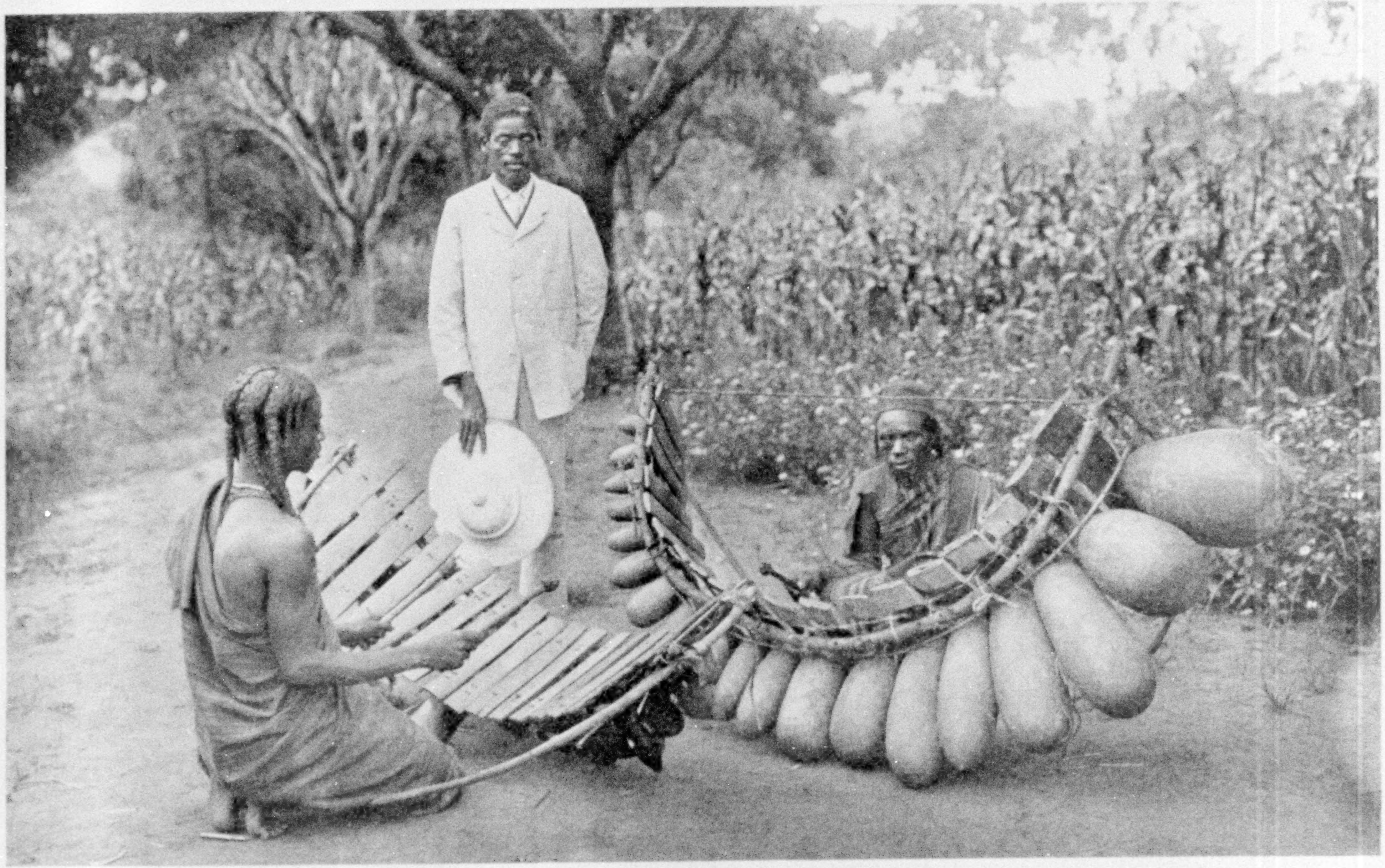
Each of these carriers was given a Liberian dime and a piece of cotton print for his labor, and they returned highly contented to their villages. This rice cost the government about two cents per pound, and the first caravan was only the forerunner of others.

Liberia, therefore, possesses the natural resources. The will to develop them also exists. These factors should create a new era in this African country, especially if Liberia's appeal for financial aid is successful. A change for the better, development along sound lines—these are things that should take place in the Republic.

Photograph from South African Railways

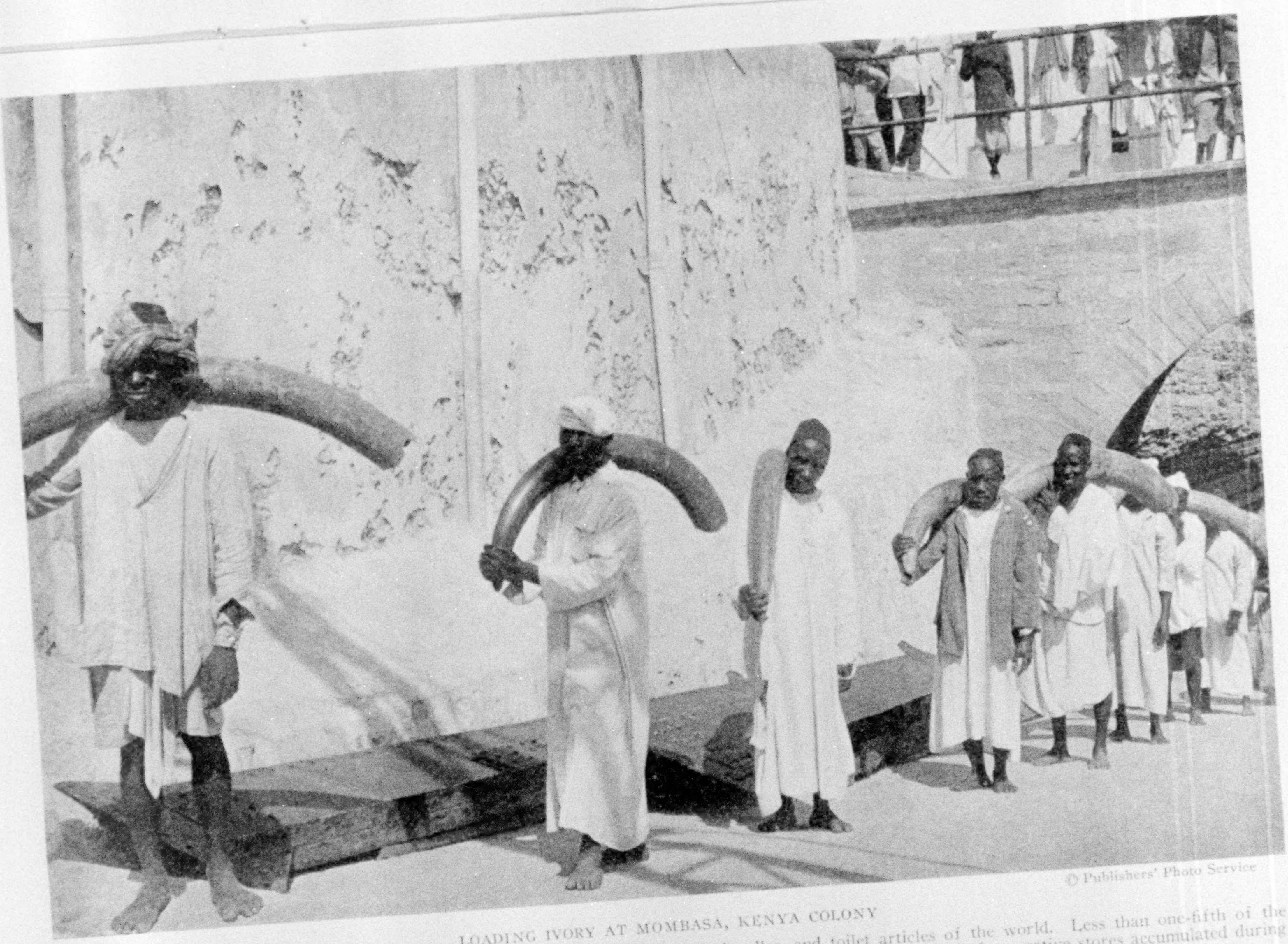
TWIN ENIGMA TO EGYPT'S SPHINX: ZIMBABWE, SOUTHERN RHODESIA

The ruins of the Great Zimbabwe, near Victoria, Southern Rhodesia, are as yet an unsolved puzzle to men of science. Some believe that the great pile was an ancient temple. Others consider it merely a kraal fortress, of Bantu design and construction, of the fourteenth century. This view shows a passage between walls 30 feet high, constructed of small cubes of hand-tooled granite.



JUNGLE PIANOS OF ANGOLA, PORTUGUESE WEST AFRICA

The quality of music produced by these instruments, with resonators made of gourds, is similar to that of our own xylophones and of the Guatemalan marimba.



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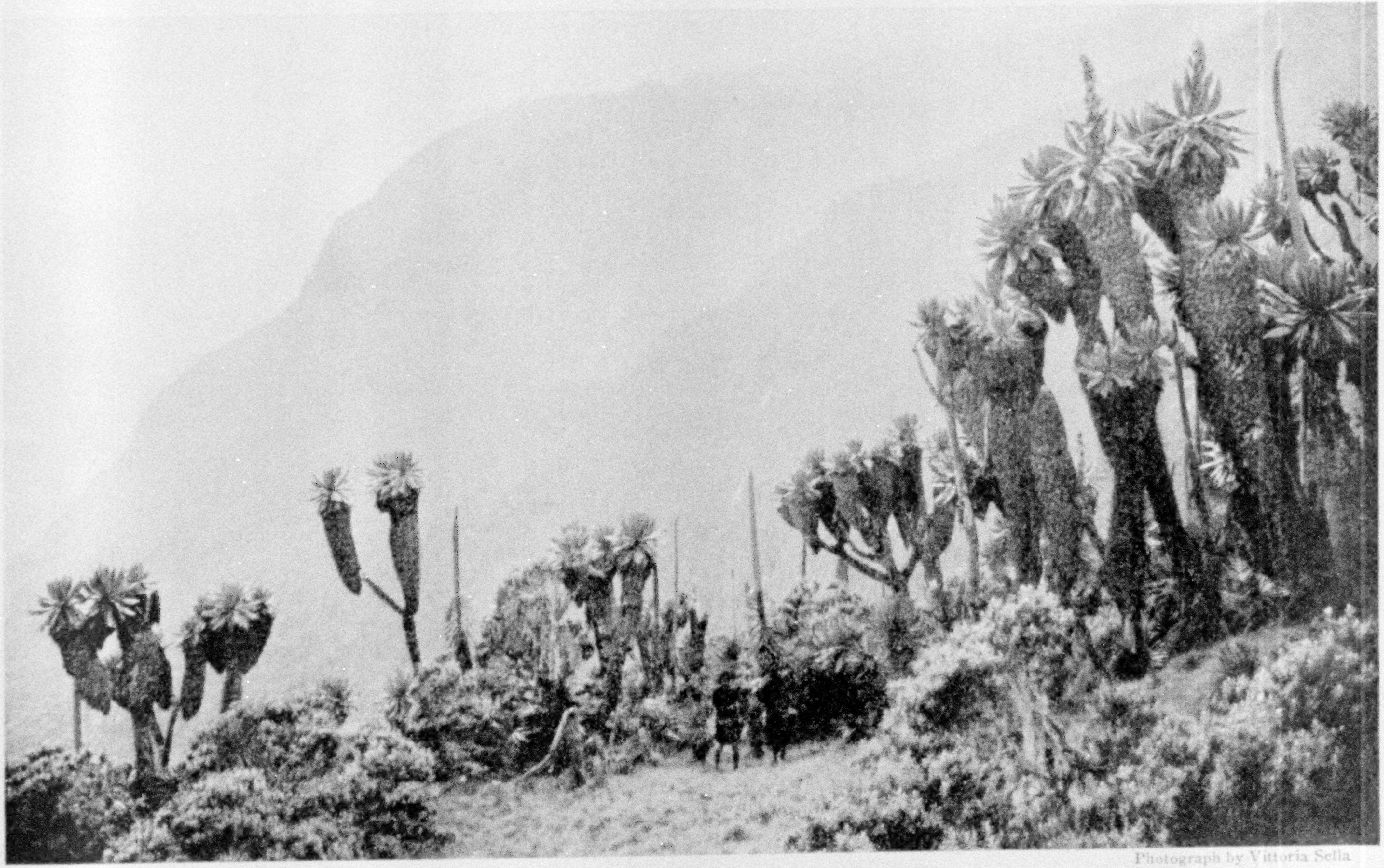
LOADING IVORY AT MOMBASA, KENYA COLONY

Africa furnishes most of the ivory for the billiard balls, piano keys, knife handles, and toilet articles of the world. Less than one-fifth of the ivory now being exported comes from animals recently killed. This is known as live ivory. Dead ivory is from native stores accumulated during many years or from tusks found in mysterious jungle hiding places where elephants have died.

Photograph by Vittoria Sella

MARGHERITA PEAK, THE LOFTIEST POINT OF MT. STANLEY, OF THE RUWENZORI RANGE, EQUATORIAL AFRICA

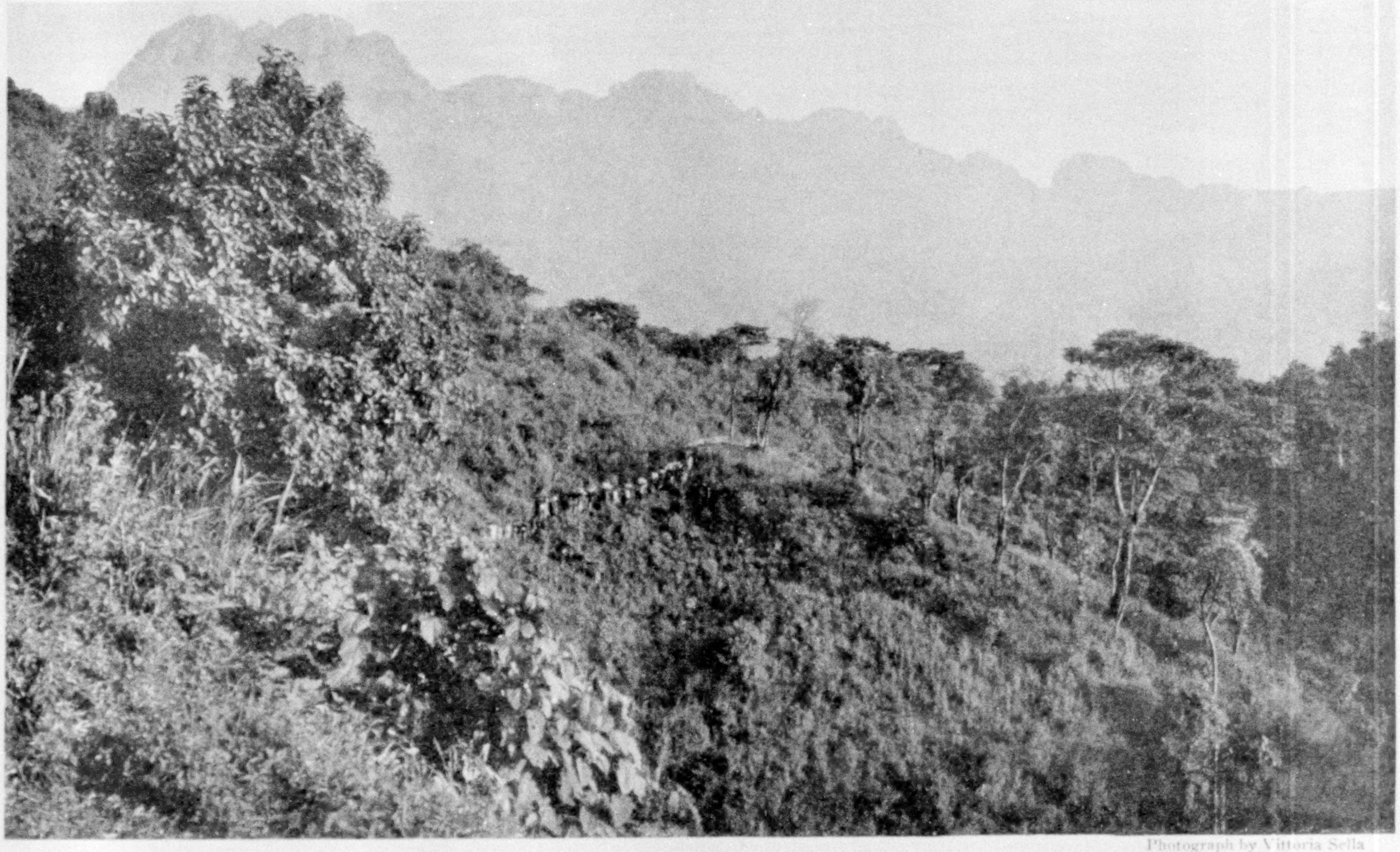
Mt. Stanley, 16,815 feet in height, is the loftiest summit of the Ruwenzori Range, a mountain mass 65 miles long and 30 broad, between Lake Albert and Lake Albert Edward. The pinnacle, named in honor of Queen Margherita of Italy, was first climbed by the Duke of the Abruzzi. Cavaliere Vittoria Sella, the distinguished Alpine photographer, accompanied the expedition and obtained these wonderful pictures.



Photograph by Vittoria Sella

SENECIO TORCHES AND LOBELIA CANDLES ON THE SLOPES OF RUWENZORI

Who would recognize in the candle-shaped *Lobelia Stuhlmanni* a close relative of the common cardinal flower, or in the top-heavy *Senecio Aduralis* a member of the same numerous family as the golden ragwort? The genus senecio numbers 1,000 species.



Photograph by Vittoria Sella

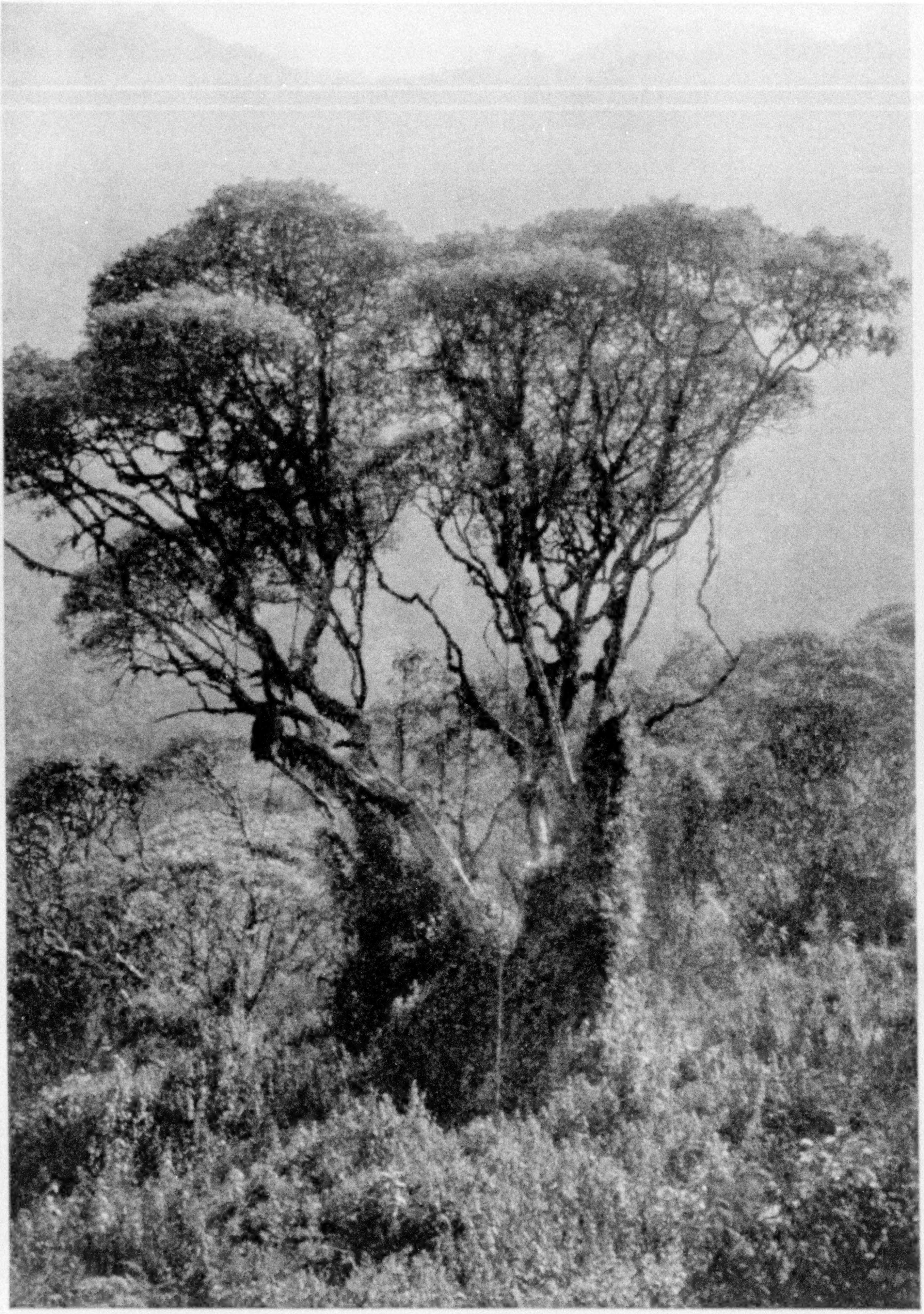
MOUNTAIN-CLIMBING IN CENTRAL AFRICA

Members of the expedition of the Duke of the Abruzzi crossing the ridge above the little village of Bihunga, which had earlier been the base for the British Museum Expedition. Bihunga is only 6,300 feet above the sea, with the loftiest peak of Ruwenzori 10,500 feet higher up.

Photograph by Vittoria Sella

TROPICAL COUSINS OF OUR FAMILIAR "INDIAN TOBACCO"

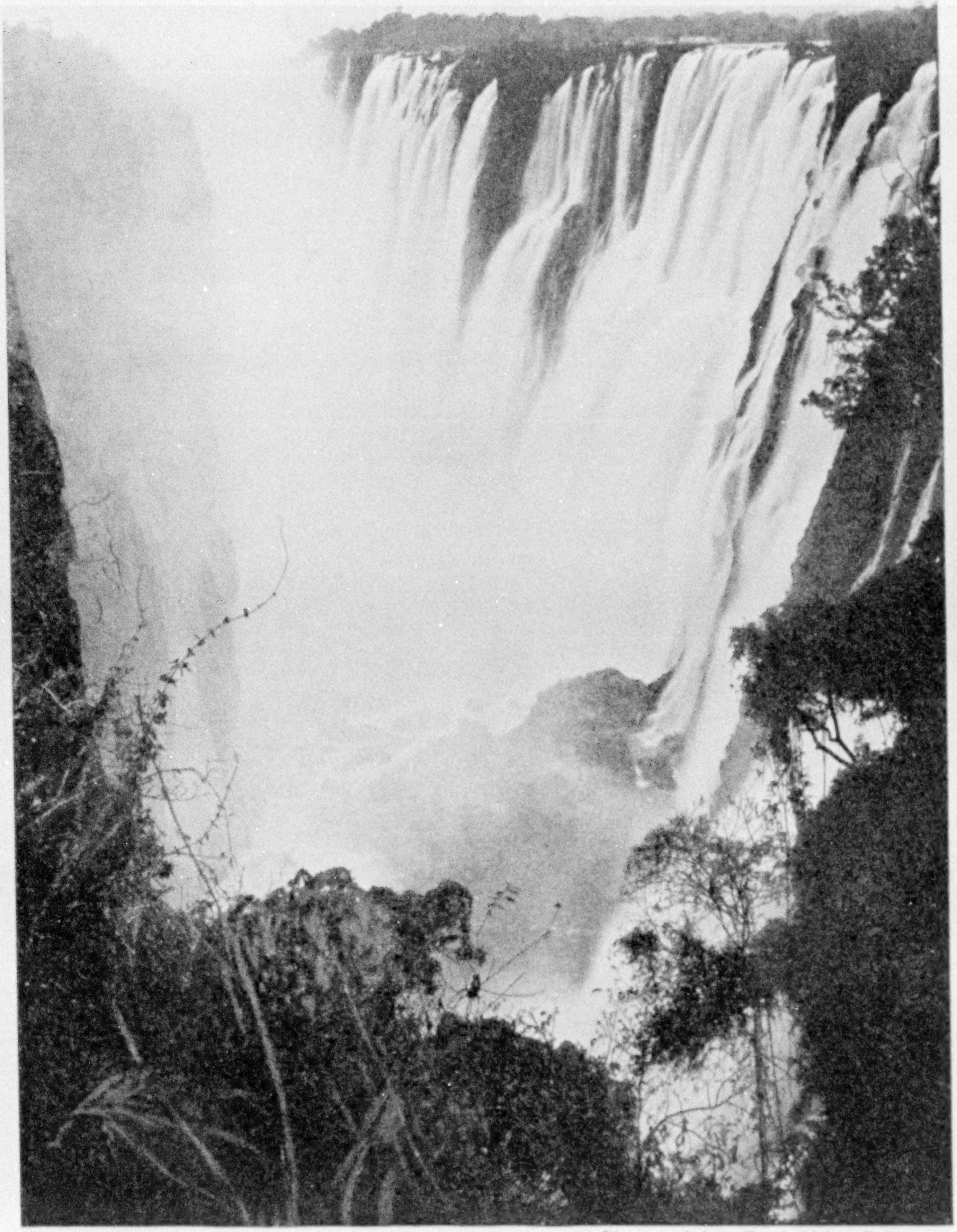
There are more than two hundred species of the lobelias, several varieties of which flourish in the midst of the heath forest on the slopes of Ruwenzori. The tree heaths grow to an altitude of 12,500 feet and are related to the heather of the Scottish Highlands.



Photograph by Vittoria Sella

TROPICAL FOREST IN THE HEART OF AFRICA

As Mt. Stanley towers above the African plateau, so this giant tree, emulating the mountain on whose slope it grows, has risen head and shoulders above its fellows.

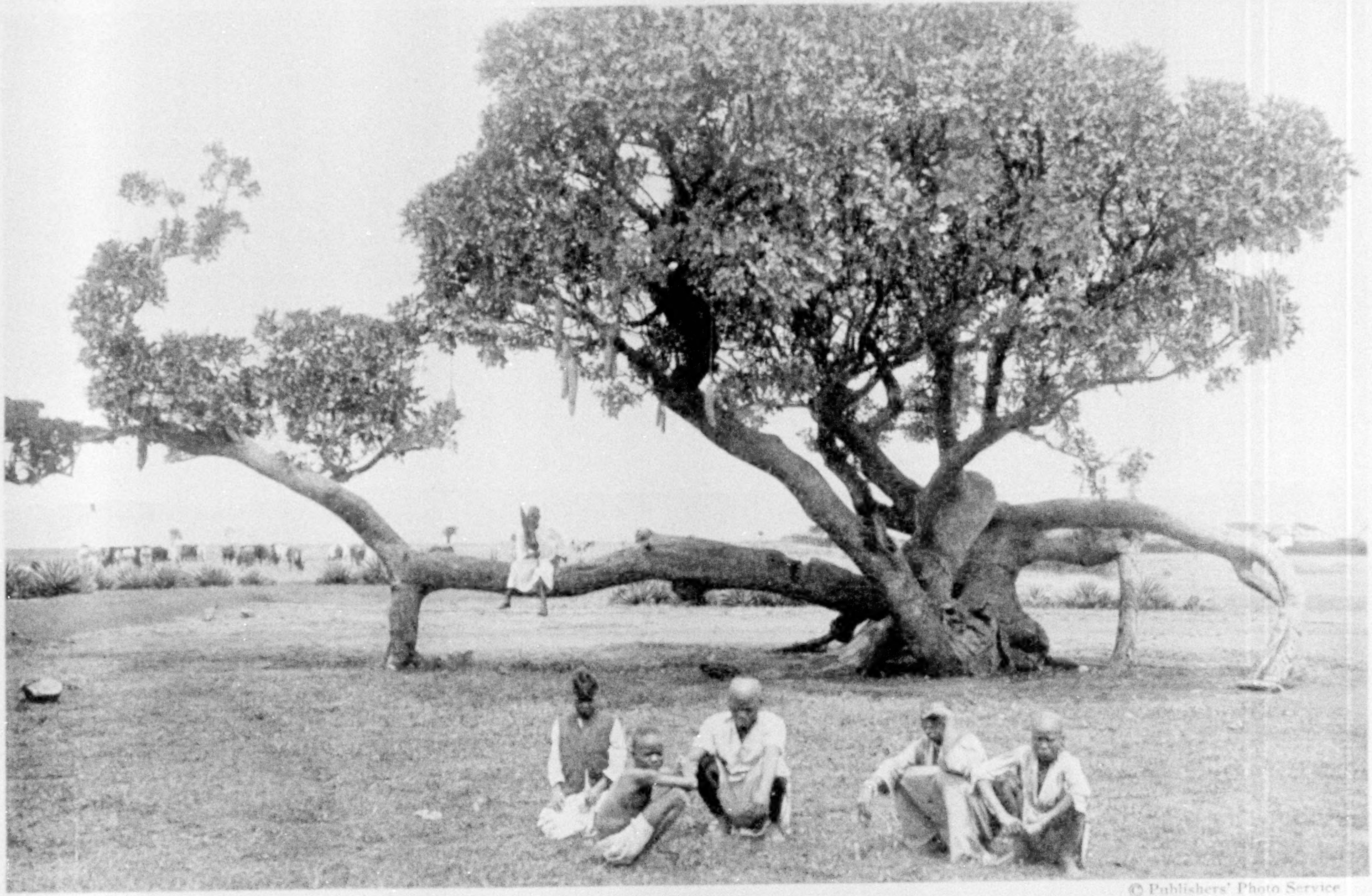


Photograph from South African Railways

HOME OF THE SOUNDING SMOKE: VICTORIA FALLS, RHODESIA

Musi-oa-tunya, "Smoke does sound there," is the native name for this queen of waterfalls, which is more than a mile wide and from 256 to 343 feet high.

XUM



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A SAUSAGE-TREE AND PLATEAU LANDSCAPE NEAR LAKE VICTORIA

Lake Victoria, the reservoir of the Nile, discovered by J. H. Speke in 1858 and by him named in honor of his queen, is the second largest lake in the world. Its altitude of 3,720 feet, coupled with its vast expanse, into which most of Scotland could be placed, makes it easily one of the most interesting inland bodies of water.

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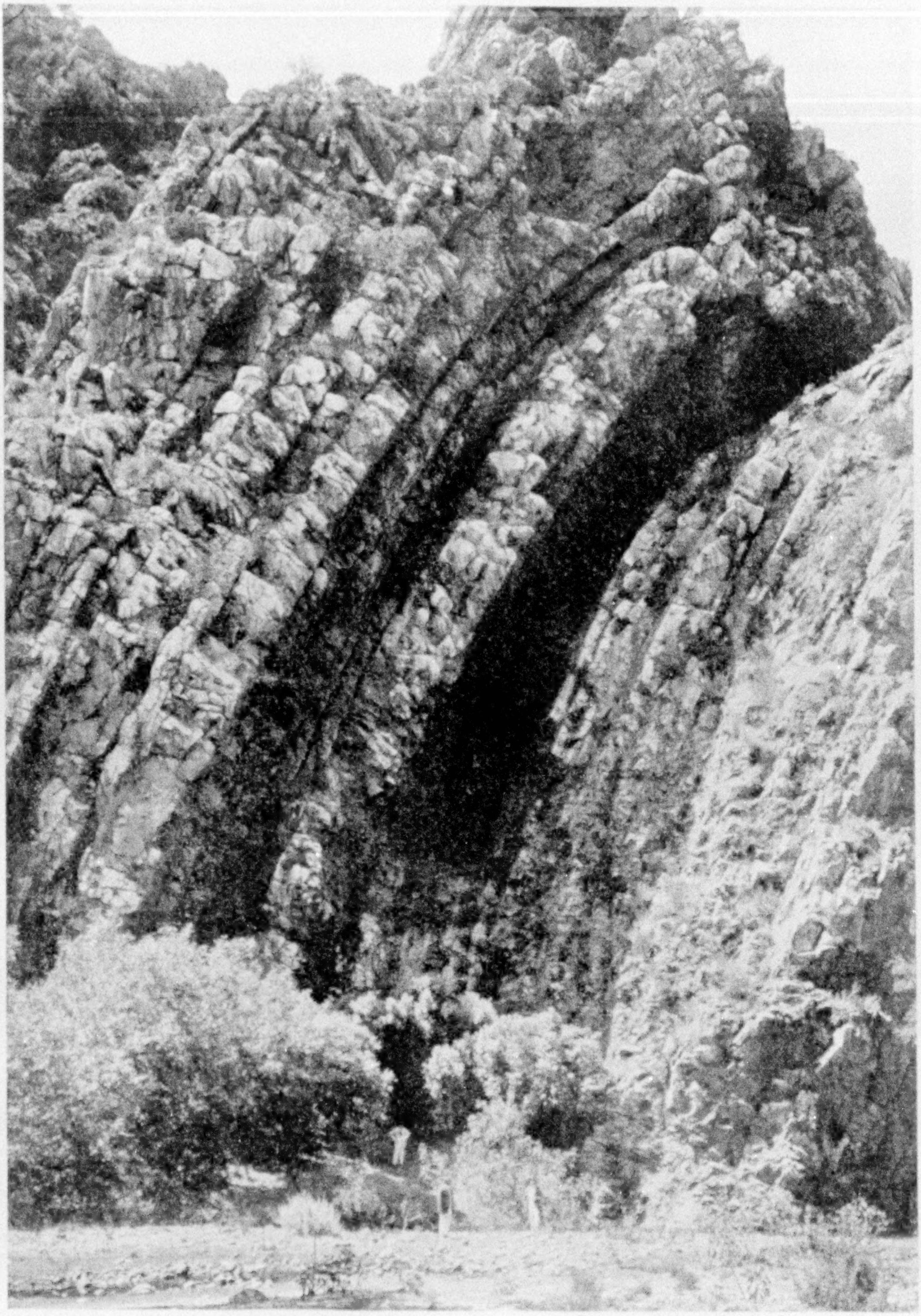
GUANO-PRODUCERS ON THE SOUTHWEST COAST OF AFRICA

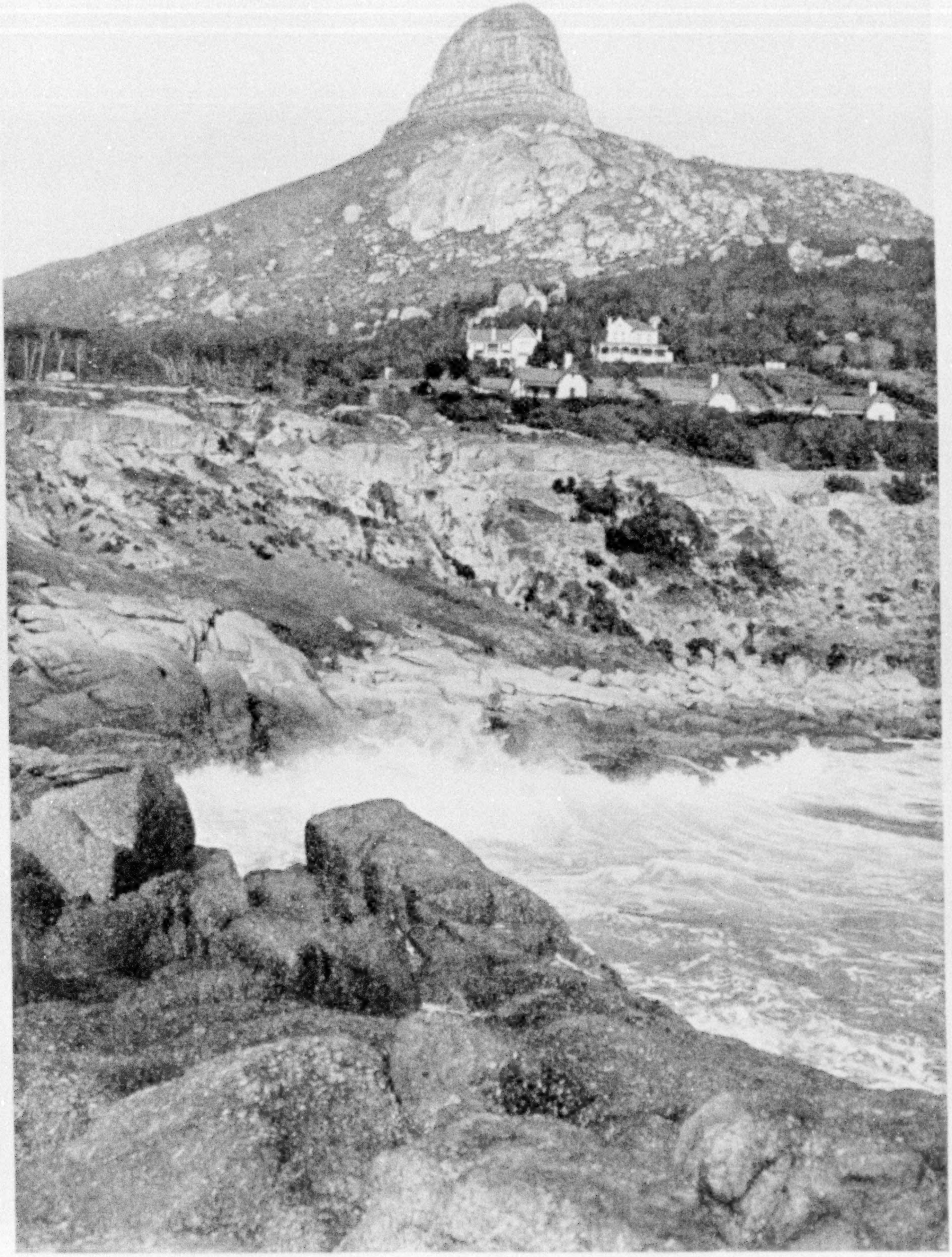
The gannet, or solan-goose, is widely known, not only as a producer of guano, but also for its ability to spy out shoals of herring and other fishes upon which it feeds. Note the indifference of these birds to the photographer in the foreground.



Photograph from South African Railways

A MIX-UP IN THE AFRICAN STRATA: CAPE OF GOOD HOPE PROVINCE

The distinguishing feature of African geography is its freedom from complex structures. South Africa is largely a table-land, reached by three steps from the sea, and such up-ended strata are not frequently met with.



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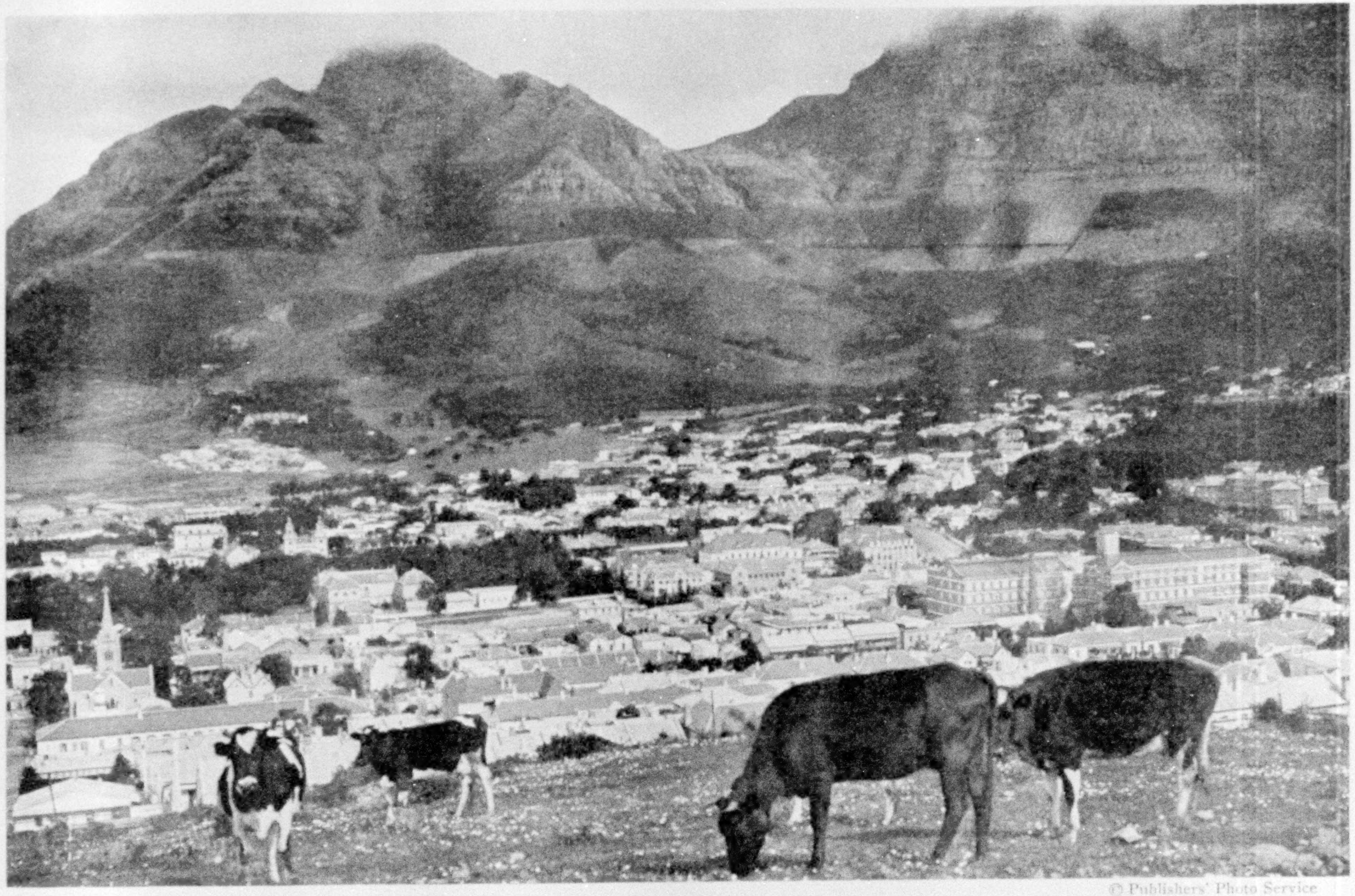
LION'S HEAD, ONE OF THE GUARDIANS OF CAPE TOWN

Table Mountain (seen in the illustration on page 444) is not the only remarkable landmark of the seat of administration of the Cape of Good Hope Province. To the east rises Devil's Peak and to the west Lion's Head.



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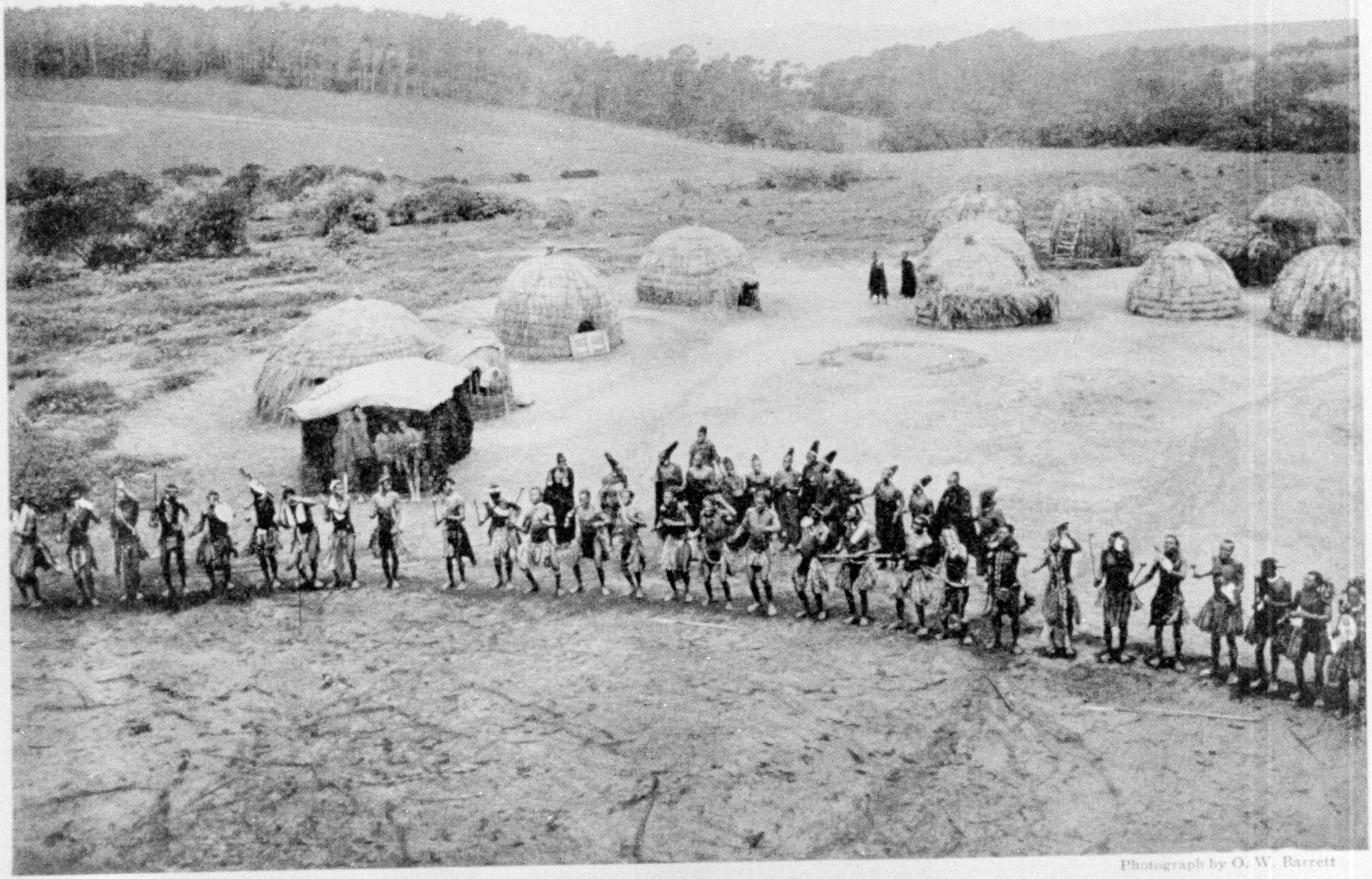
CAPE TOWN OCCUPIES AN IMPRESSIVE STAGE

To the right is Table Mountain, 3,500 feet high, a noble scenic background for a fine modern city. The two wings of the setting are Devil's Peak, on the left, and Lion's Head, from which this picture was taken (see page 443).



Photograph by O. W. Barrett

A ZULU WEDDING DANCE IN A NATAL KRAAL: SOUTH AFRICA

The women may be seen behind the line of dancers, where they are keeping time to the vocal music. They are seldom permitted to dance with the men.

Photograph from South African Railways

PULPIT ROCK IN BAIN'S KLOOF: PROVINCE OF THE CAPE OF GOOD HOPE

Cape Colony was founded by the Dutch in 1652, and on May 31, 1910, was merged in the Union of South Africa, thus becoming one of the original provinces of the Union. The pass is named after Andrew Geddes Bain, one of the great road-builders of the Colony.

THE SOCIETY'S NEW MAP OF AFRICA

With this number of the National Geographic Magazine the National Geographic Society issues the fourth of its series of continental maps, compiled and published since the World War. This New Map of Africa supersedes the smaller map issued by The Society several years ago.

The areas on that continent affected by the Treaty of Versailles are even more extensive than those so affected in Europe, so that the student of geography finds it necessary to reconstruct completely his ideas concerning African colonial possessions.

More than a million square miles of territory in Africa—one-eleventh of the entire continent—belonged to Germany in 1914. To-day, these vast regions are being administered under mandates exercised by Great Britain, France, and Belgium.

The new map shows that, as a result of the World War, the French have added to their control mandated areas considerably larger than all of France in Europe. The Tricolor now flies over more territory in Africa than does that of any other nation, French colonies, protectorates, and mandates having an aggregate area which exceeds by nearly 80,000 square miles that of the entire United States, including Alaska and all our insular possessions.

The map shows more than 735,000 square miles of territory transferred from German sovereignty to British mandates (413,000 square miles to Great Britain proper, and 322,000 square miles to the Union of South Africa). From the Empire's territorial accretions, however, must be deducted the 350,000 square miles which until recently constituted the British protectorate in Egypt.

It is interesting to note that only three countries in Africa—Liberia, Egypt, and Abyssinia, with a bare 741,000 square miles of territory—are independent. The remaining millions of square miles of the second largest continent, comprising more than one-fifth of the earth's land surface, are ruled by European nations.

The acquisition of colonial territory in Africa took place, in the main, during the last quarter of the nineteenth century. At the beginning of that century, France had a foothold on the west coast near the Senegal River; Portugal was established in lower Guinea, on the west coast, and in a small district opposite the island of Madagascar, on the east; while Great Britain's chief interest lay in Cape Colony, which had been taken from the Dutch during the Napoleonic wars.

The explorations of such men as Livingstone and Stanley, Rohlfs and Du Chaillu, during the last half of the nineteenth century, fired the popular imagination and brought about that awakening of public interest in the Dark Continent which caused a "scramble" for colonies between 1875 and 1900.

Germany did not embark upon a colony-acquiring policy until 1882, when a Colonial Society was formed to promote lectures and to establish a colonial museum in Berlin. Bismarck was won over to the scheme and German traders began to establish stations along the west coast of Africa.

One of the most active agents in Germany's colonial enterprise was a Bremen citizen, Herr Lüderitz, who acquired, by treaties with natives, a small area around Angra Pequena on the west coast, north of the Cape Colony settlement. He demanded German protection; Bismarck granted it, and in 1884 the German flag was for the first time authorized to fly over colonial property in Africa. Lüderitz's name is perpetuated in that of a small town on the coast (see H-15).

Next came acquisitions in Togoland and the Cameroons. In 1885 Germans were active on the east coast, making treaties with tribal chiefs for an enormous tract of land embracing 200,000 square miles, known subsequently as the protectorate of German East Africa.

HOW THE GERMAN HOLDINGS HAVE BEEN CONVERTED

To the Union of South Africa has been entrusted the mandate over German Southwest Africa; Great Britain has fallen mandatory heir to German East Africa, now known as Tanganyika Territory, to a strip of Togoland (13,514

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To the Union of South Africa has been entrusted the mandate over German Southwest Africa; Great Britain has fallen mandatory heir to German East Africa, now known as Tanganyika Territory, to a strip of Togoland (13,514

square miles) lying on the east bank of the Volta River and to a portion of the Cameroons (34,750 square miles) bordering on her possessions in southeastern Nigeria.

France has assumed the mandate over the major portions of Togoland (20,154 square miles) and the Cameroons (270,270 square miles).

Belgium's share in mandate responsibilities over Germany's former African colonial empire consists of the territory lying between Lake Tanganyika and Lake Victoria, known as Ruanda and Urundi—some 19,000 square miles.

The territorial interests of European countries in Africa since the mandate adjustments are represented by the following statistics:

France, 4,474,000 square miles—more than twenty times the area of the home country; Great Britain, 3,854,600 square miles—more than thirty times the area of the British Isles; Belgium, 928,900 square miles—more than eighty times the area of the governing country; Portugal, 927,200 square miles—equal to twenty-six Portugals - in - Europe; Italy, 591,200 square miles—more than four times the size of the governing country; and Spain, 128,100 square miles—about two-thirds the size of the home land.

One of the most interesting features of the New Map of Africa compared with that published by The Society several years ago is the remarkable development of the continent's railways. The lines under construction are being completed so rapidly that on two occasions during the publication of the Map, which required three months, it was found necessary to stop the presses and change the lines from "proposed" to "finished" railroads.

In several instances, the boundaries between colonial possessions have not yet been fixed definitely. In such cases the tentative or approximate lines are shown by broken color lines, as, for example, between French West Africa and Italian Libya and between Italian Libya and Egypt. The boundary between Italian Somaliland and British Kenya is also in the course of amicable adjustment.

In the spelling of native place names, the British transliteration system has been adopted, but a key has been provided (in the Note in the lower right corner of the Map), which will enable the student to obtain the French, Belgian, Italian, and Portuguese equivalents of the English sounds.

OTHER MAPS IN PREPARATION

The Map of Africa will be followed in the near future by a Map of the World, drawn on a newly-devised projection, which shows the Western Hemisphere practically without distortion. Later will appear a splendid Map of the United States of convenient size.

The maps already published by The Society and issued as supplements with the NATIONAL GEOGRAPHIC MAGAZINE during 1921 and 1922—Europe, Asia, South America, the Islands of the Pacific, the Countries of the Caribbean, and Africa—represent an expenditure for compiling, engraving, and printing of more than $200,000.

In the compilation of data for the Map of Africa The Society wishes to acknowledge its appreciation of special facilities placed at its disposal by and valuable advice received from the Map Division of the United States State Department, the Graphic Section of the Army War College, and members of the American Consular Service stationed in Africa.

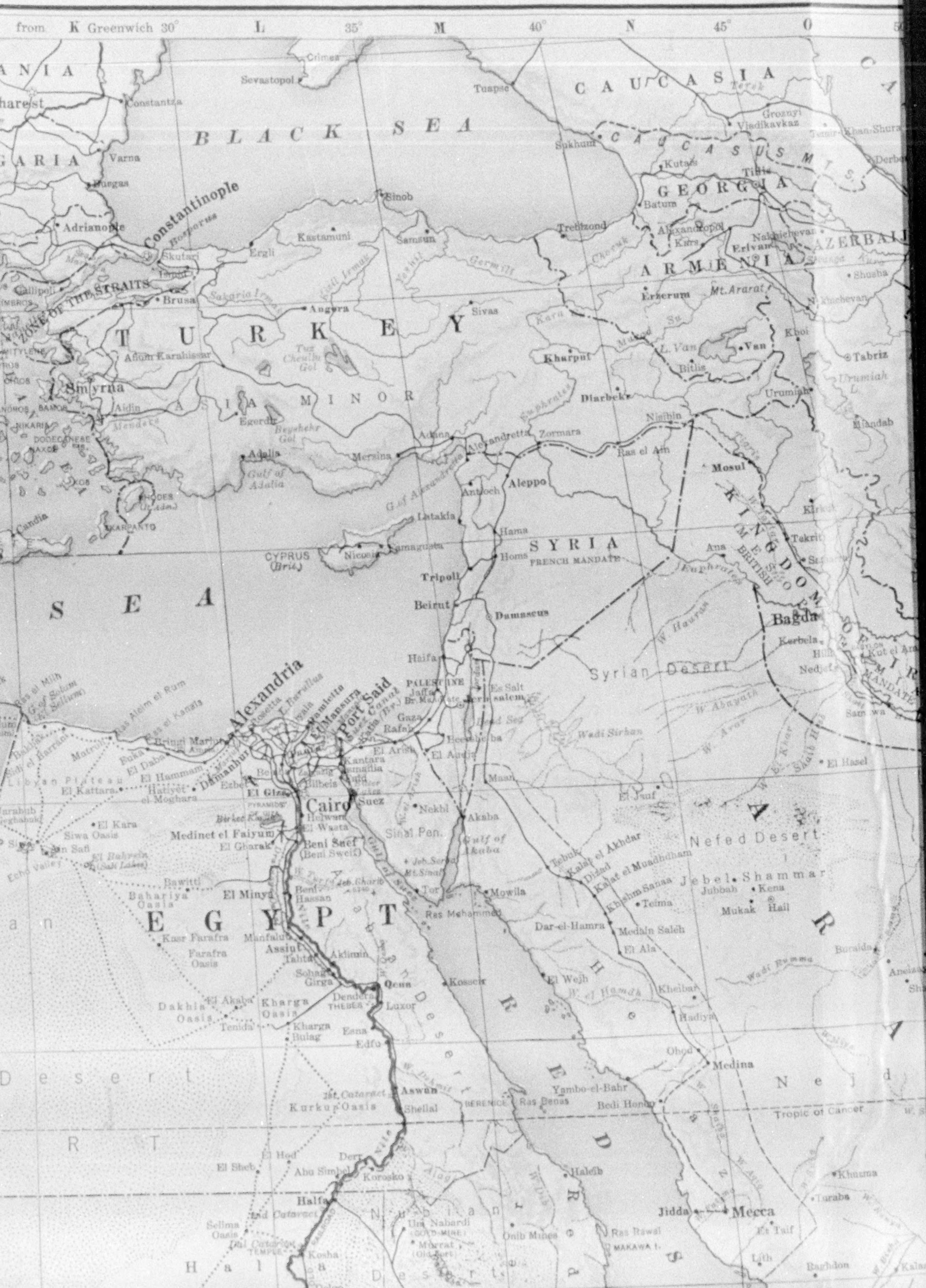
REGARDING ADDITIONAL COPIES MAP OF AFRICA

Additional copies of the Map of Africa are obtainable from the headquarters of the National Geographic Society, Washington, D. C., only, at $1.00 each on paper, and $1.50 printed on linen map paper; maps in color of the New Europe (30 x 33 inches), Asia (28 x 36), South America (25 x 35), Islands of the Pacific (19 x 25), and Countries of the Caribbean Map (42 x 23½) at the same prices.

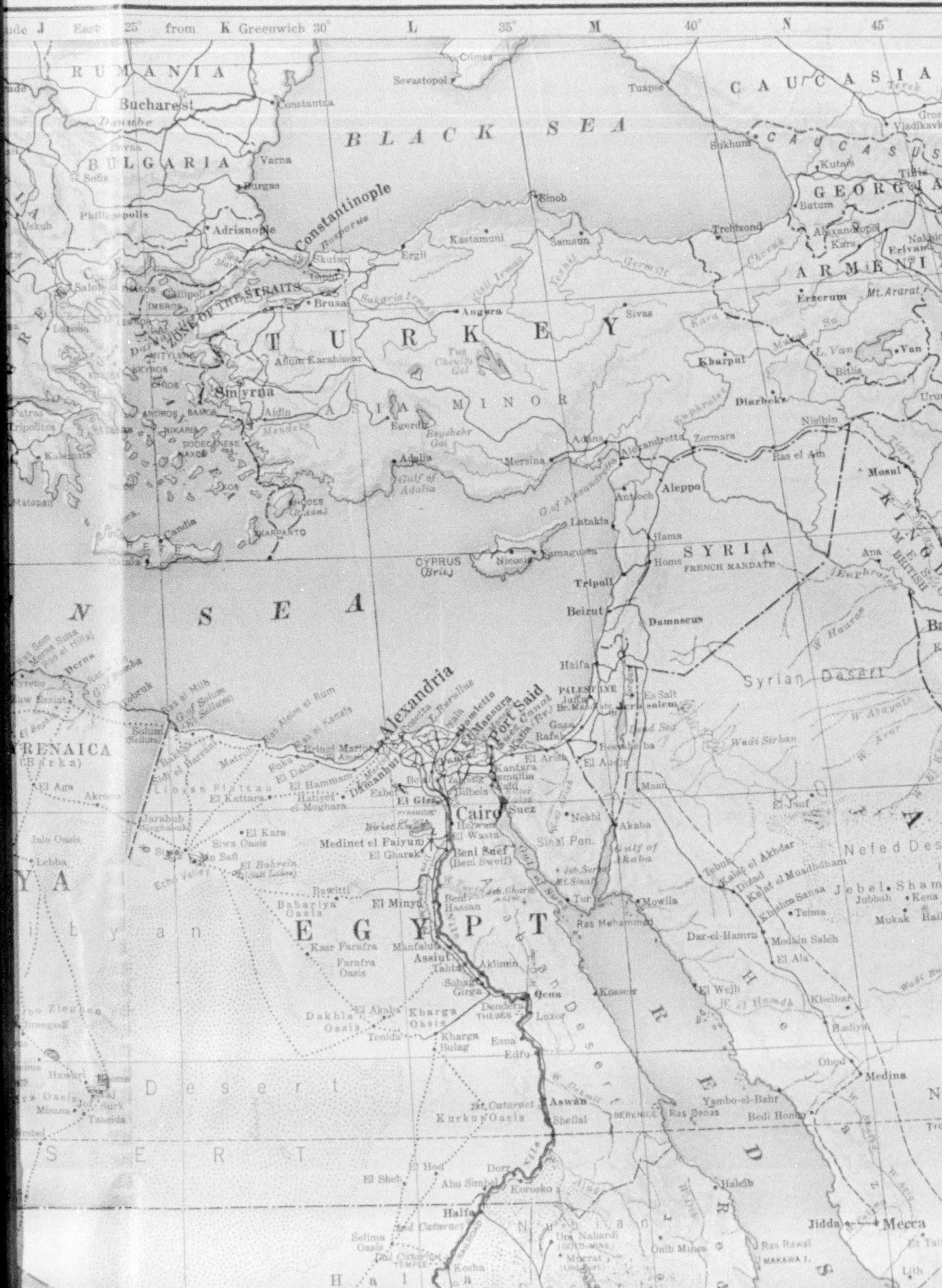
25°
20°
A
15° Longitude B West 10° from C
ATLANTIC
OCEAN
El Ferrol
C.Finisterre
La Coruña
Minho
Oporto
Douro
PORTUGAL
C.Carvoeiro
Lisbon
Tagus
C.Espichel
Badajoz
Guadiana
Seville
C.St.Vincent
Gulf of Cadiz
Cadiz
Strait of Gibraltar
Tangier (International)
Ceuta
Arzila
Larache (El Araish)
Alcazar (El Kasr-el-Kebir)
Mehediya
Sale
Rabat
Fez
Casablanca (Dar-el-Beida)
Azemmur
Mazagan (Jedida)
Mekinez
Sefru
Fedala
Ber Rechid
Tiwant
Almis
Settat
Bu-Lawane
Wod Zem
Kasba Walidia
Safi
Kasba Beni Mellal
Ben Guerir
W. Tensift
Morocco (Marrakesh)
Mogador
C.Sim
MOROCCO
(French Protectorate)
HIGH ATLAS
Kasba Gundafi
C.Ghir
Agadir
Tarudant
Ait Baba Aubion
Ait Tlagin
Arbalu
Tamgrut
Agla
Ifni (Sp.)
Tiznit
Tintazart
W. Dra'a
Gulimim
Tagzist
Tisgi Sellam
Tikuna
C.Dra
W. Dra
Assa
Ksar Shair
Zmul
El Harib
Timfuchi
Tafilbala
Serir
Mayara
Rhemiles
Tarmasun
Spanish Zone of Protectorate
Adoshka
Tinduf
Wahila
Surra
Tingrga
Salkha
C.False Bojador
Smara
Zone open for Spanish Occupation
C.Bojador
Kedda
Batemia
Saint Malda
Daia el Khadra
Regbat
Oglet Uld Yacub
Yetti
El Eglab
Bir el Abbas
Solb
Moghria
Zemmur
Grona
C.Garnet
Aiun Abd El Malek
El Mzereb
Mdehna
RIO DE ORO
(Spanish)
Villa Cisneros
Tawarashit
Anajim
Railaman
Tropic of Cancer
El Fui
Munina
El Wessat
Tagujalet
Hasd Duinus
Tenuaka
Karet
Cintra Bay
Tiris
St.Cyprian Bay
Iniyan
VIRGINIA I.
Hassi Auser
C.Corveiro
Daita el Begar
Agarektem
Taudeni
Bir Zregat
Adrar Sotuf
Delim
Auadi
Ballawia
El Gattara
Lebsenia
C.Blanco
Levrier Bay
C.Sta.Ana
Arguin Bay
Wadan
Atar
Adrar
El Juf
Great Depression
Desert
(Unknown Desert)
TIDRE I.
Inghiri

C Greenwich
D
E
F
G
Trieste
Venice
Bay of Biscay
Gijon
Santander
San Sebastian
Bilbao
Oviedo
Bordeaux
F R A N C E
Toulouse
P Y R E N E E S
Pamplona
Burgos
Ebro
ANDORRA
C. Creus
Valladolid
Saragossa
S P A I N
Madrid
Barcelona
C. de Tortosa
Tagus
Valencia
Murcia
Cartagena
C. de Palos
Alicante
Linares
Cordoba
Granada
Malaga
Gibraltar
(British)
C. de Gata
Ceuta
Tetuan
Melilla
SPANISH ZONE
BALEARIC ISLANDS
(Spanish)
MINORCA
Palma
MAJORCA
CABRERA
PITYUSAE ISLES
IVIZA
FORMENTERA
Genoa
Gulf of Genoa
Marseille
Gulf of Lions
Bologna
Ravenna
Florence
Ancona
Leghorn
I T A L Y
Chieti
CORSICA
(French)
Bastia
Ajaccio
Strait of Bonifacio
Rome
Tiber R.
Naples
Mt. Vesuvius
G. of Gaeta
G. of Salerno
SARDINIA
(Italian)
TYRRHENIAN
SEA
Carloforte
Cagliari
LIPARI OR AEOLIAN IS.
M E D I T E R R A
Palermo
Messina
SICILY
Mt. Etna
Catania
Syracuse
Girgenti
PANTELLERIA
(It.)
LINOSA
(It.)
LAMPEDUSA
(It.)
MALTA
(Br.)
Valletta
Algiers
(Alger)
Oran
Mostaganem
Tenes
Bougie
Constantine
Philippeville
Bone
(Bona)
La Calle
Tabarca
GALITA
Bizerta
Porto Farina
C. Bon
Ras Addar
Kelibia
Nabeul
Hammamet
Gulf of Hammamet
Monastir
Mahdia
C. Africa
Sfax
KERKENNA IS.
Mahares
Tunis
Beja
Kairwan
Tebessa
Kasserine
Under French Administration
Gafsa
Metlawi
Gabes
G. of Gabes
Tozeur
Humt Suk
JERBA I.
Zarzis
Blida
Medea
Aumale
Orleansville
Setif
Biskra
Batna
Tlemcen
Mascara
Sidi bel Abbes
ALGER
NORTHERN ALGERIA
CONSTANTINE
A L G E R I A
ATLAS MOUNTAINS
SAHARA ATLAS
Ujda
Fez
Taza
Debdu
Taurirt
El Arisha
Sebdu
Geryville
Mecheria
Ain Sefra
Figig
Beni Unif
Colomb Beshar
Kenadsa
Abadla
Taghit
Igli
Beni Abbes
Zeramra
Tabelbala
AIN SEFRA
Laghwat
GHARDAIA
Ghardaia
TUGGURT
Tuggurt
El Wad
Shott Melghir
Shott Merwan
Wargla
TUNISIA
(French)
Medenin
Ben Gardane
Tripoli
Tajura
Homs
Misurata
Zuara
El Ajilat
Jefara Plain
Azizia
Gharyan
Yefren
Jado
Nalut
Beni Ulid
Misda
Sinaun
Dehibat
Ft. Lallemand
SOUTHERN ALGERIA
Grand Areg Occidental
El Golea
Ft. Mac Mahon
Ft. Hassi Inifel
Ft. Miribel
Gurara
Timmimun
Kerzaz
Adrar
Tamentit
El Aulef
In Salah
(Insalah)
Ain el Gettara
SAHARA OASIS
(TERRITOIRE DES OASIS)
Akabli
Taurirt
Tidikelt
Hammada Tinghert
Timassanin
(Ft. Flatters)
Ghadames
Derj
Hammada el Homra
Egele Plateau
Edeyen Desert
Undefined
TRIPOLITANIA
ITALIA
El Hassi
Ederi
Jofra Oasis
Sokna
Jedid
Sebha Oasis
Ghodwa
Temissa
Ubari
Murzuk
Serdeles
Asjer
Ghat
(Rhat)
Janet
Amais
Bir Falosseles
Tazili Plateau
Abenet
Hoggar or Ahaggar
Tesnu
Ideles
In Siza
Mt. Hikena
Mt. Walellen
Abalessa
Tamanrasset
Tadent
W. Tamanrasset
Tanezruft
(Unknown Desert)
Undefined
Areg Azur
Boundary
G R E A T
Imoshagh or Tuareg
In Azawa
Adrar
Tummo
Gatron
Tejerri
Anai
Jado
Yat
Lebo
Tedjerr

5
F
10
G
Trieste
H
20 Longitude J East 25 from
FREE STATE OF FIUME
Venice
Genoa
Bologna
Ravenna
RUMANI
Belgrade
Bucharest
Danube
Marseille
Gulf of Genoa
Florence
Ancona
ADRIATIC SEA
JUGOSLAVIA
Spalato
Sarajevo
Mostar
Nish
BULGARI
Sofia
Gulf of Lions
Leghorn
Bastia
CORSICA (French)
Ajaccio
Chieti
Cetinje
Scutari
ALBANIA
Uskub
Philippopolis
Strait of Bonifacio
Rome
ITALY
Durazzo
Tirana
Monastir
Tiber R.
Bari
G. of Gaeta
Naples
Mt. Vesuvius
Brindisi
Valona
Salonika
MINORCA
SARDINIA (Italian)
TYRRHENIAN SEA
G. of Salerno
Gulf of Taranto
C.S. Maria di Leuca
CORFU
Janina
Larissa
Carloforte
Cagliari
LIPARI OR AEOLIAN IS.
IONIAN SEA
Arta
GREECE
SANTA MAURA
Catanzaro
Palermo
Messina
Reggio
CEPHALONIA
ZANTE
Patras
Tripolitsa
SICILY
Mt. Etna
Catania
Syracuse
Girgenti
Kalamata
Arcadia
PANTELLERIA (It.)
LINOSA (It.)
LAMPEDUSA (It.)
Valetta
MALTA (Br.)
C.Matapan
Constantine
Philippeville
Bone
Bizerta
Porto Farina
Goletta
Tunis
Kairwan
Hammamet
Gulf of Hammamet
Monastir
Mahdia
Sfax
Kasserine
Gafsa
Tozeur
Gabes
KERKENNA IS.
Mahares
Hunt Suk
JERBA I.
TUNISIA (French)
Shott Merwan
TUGGURT
Tuggurt
El Wed
Ben Gardane
Medenin
CONSTANTINE
MEDITERRANEAN SEA
Tripoli
Tajura
Homs
Sliten
Misurata
C. Zorrug
El Ajilat
Jefara Plain
Azizia
Dehibat
Jado
Yefren
Gharyan
Nalut
Beni Ulid
Mizda
Sinaun
El Mudar
Gulf of Sidra
Kasr Zafran
Sirte
Bonjem
Ghadames
Derj
Atna
Tolmetta
Tokra
Benghazi
Merj
Cyrene
Derna
Zaw Ezziat
Ras el Tin
G. of Bomba
Tobruk
Coast of Zrada
Jemines
Zuetina
Jedabia
CYRENAICA (Barka)
El Aga
Akroma
W. Faregh
TRIPOLITANIA
Hammada el Homra
Hammada Tinghert
ITALIAN LIBYA
Jofra Oasis
Sokna
Jebel Soda
El Hassi
Ederi
Aujila Oasis
Jalo Oasis
Lebba
Jarabub
Soltan Oasis
Libyan
Egele Plateau
Edeyen Desert
El Fugha
Wabri
Jerabia
Bel Haidan
Jedid
Sebha Oasis
Ghodua
Ubari
Kunnaba
Temissa
Fezzan
Serdeles
Murzuk
Terbu
Tezili Plateau
Asjer
Wau el Kebir
Tibesti
Jirangedi
Ghat (Rhat)
Janet
Gatron
Wau el Namus (Wau el Seghir)
Buseima
Hawari
Erbehna (Ribiana)
Kufra Oasis
Taj
Surk
Misana
Tabeida
Amais
Bir Falesseles
Tejerri
Anai
Boundary
Sarfaya
Kurbet el Simbel
G R E A T D E S E R T
Tadent
Tummo (El War)
Lebo
More Dea
Ahaggar
Teda or Tibbu
Aozu
Jado
Bardai
Yebbi
TIBESTI
Gubon
Yat
Sulaya (Gharb)
Tummo Mts.



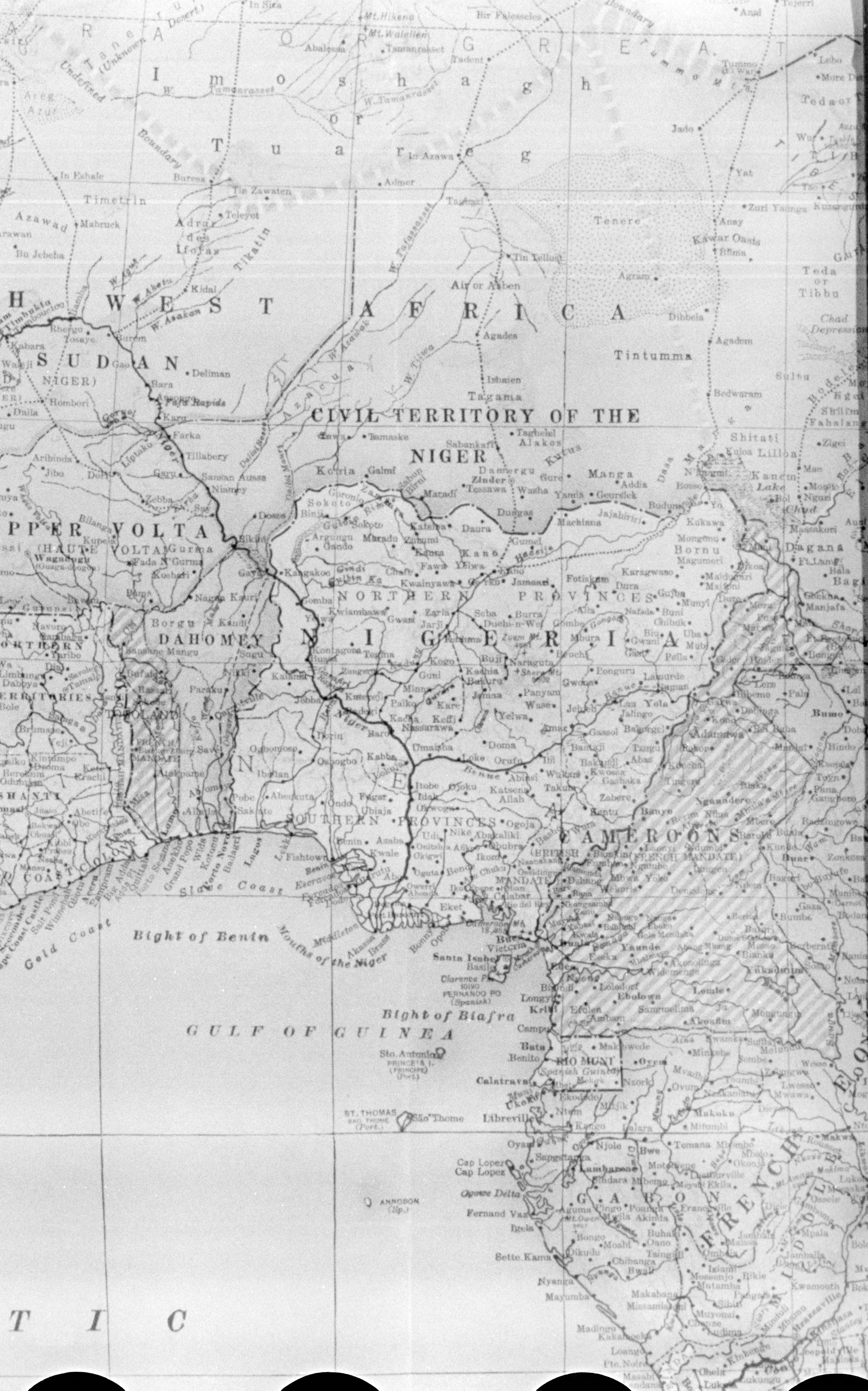
from K Greenwich 30° L 35° M 40° N 45° O
BLACK SEA
CAUCASIA
CAUCASUS MTS.
GEORGIA
ARMENIA
AZERBAIJ
TURKEY
ASIA MINOR
ZONE OF THE STRAITS
Constantinople
Bosporus
Crimea
Sevastopol
Constantza
Varna
Burgas
Adrianople
Gallipoli
Skutari
Brusa
Angora
Ergli
Kastamuni
Sinob
Samsun
Tuapse
Sukhum
Kutais
Tiflis
Batum
Trebizond
Alexandropol
Kars
Erivan
Nakhichevan
Grozny
Vladikavkaz
Shusha
Erzerum
Mt. Ararat
Sivas
Kharput
Van
L. Van
Bitlis
Diarbekr
Urumiah
Tabriz
Smyrna
Aidin
Afium Karahissar
Egerdir
Adalia
Gulf of Adalia
Mersina
Adana
Alexandretta
Zormara
Nisibin
Ras el Ain
Mosul
Aleppo
Antioch
Latakia
Hama
Homs
CYPRUS (Brit.)
Nicosia
Famagusta
SYRIA
FRENCH MANDATE
Tripoli
Beirut
Damascus
Haifa
PALESTINE
Jaffa
Jerusalem
Es Salt
Dead Sea
Gaza
Rafah
Beersheba
El Arish
Ana
Euphrates
Tigris
Bagdad
Kerbela
KINGDOM OF IRAQ
BRITISH MANDATE
Syrian Desert
Wadi Sirhan
SEA
Alexandria
Port Said
Suez Canal
Damietta
Mansura
Rosetta
Damanhur
Cairo
El Giza
Suez
Helwan
Medinet el Faiyum
Beni Suef
El Minya
Beni Hassan
Manfalut
Assiut
Sohag
Girga
Qena
Dendera
Luxor
THEBES
Esna
Edfu
Aswan
Shellal
1st Cataract
Kurkur Oasis
EGYPT
Siwa Oasis
Libyan Plateau
Bahariya Oasis
Kasr Farafra
Farafra Oasis
Dakhla Oasis
Kharga Oasis
Desert
Sinai Pen.
Nekhl
Akaba
Gulf of Akaba
Tor
Ras Mohammed
Mowila
Kosseir
Tebuk
Medain Saleh
El Ala
El Wejh
Kheibar
Medina
Yambo-el-Bahr
Jidda
Mecca
Et Taif
Nefed Desert
Jebel Shammar
Hail
Teima
Nejd
Tropic of Cancer
Halfa
2nd Cataract
Korosko
Abu Simbel
Nubian Desert
Halaib
Berenice
Ras Benas
RED SEA
ARABIA



East 25° from Greenwich 30°
35°
40°
45°
RUMANIA
Bucharest
Constantza
Danube
BULGARIA
Varna
Sofia
Burgas
Philippopolis
Adrianople
Constantinople
Bosporus
BLACK SEA
Crimea
Sevastopol
Tuapse
CAUCASIA
CAUCASUS
Sukhum
Vladikavkaz
Kutais
Tiflis
GEORGIA
Batum
Trebizond
Alexandropol
Kars
Erivan
ARMENIA
Mt. Ararat
Erzerum
Sinob
Kastamuni
Samsun
Ergli
Scutari
Ismid
Brusa
Gallipoli
ZONE OF THE STRAITS
IMBROS
Angora
Sivas
TURKEY
Sakaria Irmak
Kizil Irmak
Afium Karahisar
Kharput
L. Van
Van
Bitlis
Diarbekr
MYTILENE
SKYROS
CHIOS
Smyrna
Aidin
ANDROS
SAMOS
NIKARIA
NAXOS
DODECANESE
ASIA MINOR
Egerdir
Beyshehr Gol
Adalia
Gulf of Adalia
Mersina
Adana
Alexandretta
Gulf of Alexandretta
Zormara
Nisibin
Ras el Ain
Mosul
Aleppo
Antioch
Latakia
Hama
Homs
SYRIA
FRENCH MANDATE
Euphrates
Ana
Tigris
RHODES
KARPANTO
Candia
CRETE
CYPRUS (Brit.)
Nicosia
Famagusta
Tripoli
Beirut
Damascus
Haifa
PALESTINE
Jaffa
Jerusalem
Es Salt
Dead Sea
Syrian Desert
Wadi Sirhan
Patras
Tripolitza
Kalamata
SEA
Derna
Tobruk
Ras el Milh
Gulf of Solum
Solum
CYRENAICA (Barka)
El Aga
Akroma
Jarabub
Jalo Oasis
Siwa Oasis
El Kara
Alexandria
Rosetta
Damietta
Mansura
Port Said
Suez Canal
Kantara
Ismailia
Gaza
Rafah
El Arish
Beersheba
El Auja
Maan
El Jauf
Matruh
El Daba
El Hammam
Damanhur
El Kattara
Libyan Plateau
El Giza
Cairo
Suez
PYRAMIDS OF GIZA
Helwan
Nekhl
Akaba
Gulf of Akaba
Sinai Pen.
Mt. Sinai
Tor
Mowila
Medinet el Faiyum
Beni Suef
El Gharak
Bawiti
Baharlya Oasis
El Minya
Beni Hassan
EGYPT
Ras Mohammed
Kasr Farafra
Farafra Oasis
Manfalut
Assiut
Akhmim
Sohag
Girga
Qena
Dendera
THEBES
Luxor
Kosseir
Dakhla Oasis
Kharga Oasis
Esna
Edfu
Aswan
Shellal
1st Cataract
Kurkur Oasis
BERENICE
Ras Benas
Desert
Tebuk
Kalat el Akhdar
Didad
Kalat el Muadhdham
Teima
Medain Saleh
El Ala
Dar-el-Hamra
El Wejh
Kheibar
Hadiya
Medina
Yambo-el-Bahr
Bedi Honein
Jebel Shammar
Nefed Desert
Jubbah
Mukak
Wadi Halfa
El Sheb
Derr
Abu Simbel
Korosko
Halaib
Nubian
Selima Oasis
2nd Cataract
Um Nahardi (GOLD MINE)
Murrat (Old Fort)
Oniib Mines
Ras Rawai
MAKAWA I.
Kosha
Jidda
Mecca
Lith
RED SEA
Libyan Desert
DESERT

50°
P
55°
Q
60
R
65°
CASPIAN SEA
ASIA
CENTRAL ASIA
Kol.Pursu-burun
Kol.Suphya-sukh
Kara-Bugazskii Gulf
Ak-bura Mt.
Grozny
Vladikavkaz
Temir-Khan-Shura
Derbent
Tiflis
C.Apsheron
Baku
AZERBAIJAN
Nakhichevan
Erivan
Shusha
Salyany
Ararat
Krasnovodsk
Dzhebel
Kazandzhik
Kizil-Arvat
CHELEKEN I.
OGURCHINSKII I.
Askhabad
Merv
Khoi
Van
Tabriz
Ardabil
Urumiah L.
Urumiah
Enzali
Resht
ELBURZ MTS.
Chikishlyar
Bujnurd
Astrabad
Kara Su
Meshed
Miandab
Zindjan
Barfrush
Kasbin (Kazvin)
Teheran (Tehran)
Samnan
Juba
Turbat-i-Haidari
Kushk Post
Abdul Azim
Bidjar
Dasht-i-Kavir
AFGHANISTAN
Kirkuk
Hamadan
Kum
Tun
Tekrit
Samarra
Kermanshah
Burujird
Kashan
PERSIA
Ardistan
Khonsar
BRITISH
Karkha
Ispahan (Isfahan)
Bagdad
Kerbela
Hilla
Nedjef
Kut el Amara
Amara
IRAQ
MANDATE
Dizful
Shushtar
Dupulan
Yezd
Bafk
Kuh-i-Shah
Abadeh
Abrquh
Dehbid
Samawa
Nasiriya
Kurna
Nasiri
Fallahieh
Mohammarah
Basra
Bandar Dilam
Bahramabad
Kerman
Fao
El Hasel
SUSIAN I.
Kowelt
Shiraz
Boraadjun
Niriz
Bushire
Jahrum
Daulatabad
Khanu
Gilehdar
Bandar Abbas
Charak
Kishm
KISHM I.
Khasab
Strait of Ormuz
Gulf of Oman
PERSIAN GULF
Antaa
BAHREIN I. (Br.)
Manama
Ras Mashaira
Buraida
Zilfi
Aneizay
Shagra
Ojair
Hofuf
Dohah (Bida)
Sharjah
Abu Dhabi
Sohar
Katar
Ras Masnorh
Trucial Coast
Riad (Riyadh)
OMAN
Obri
Nejd
Kharfa
Tropic of Cancer
ARABIA
Khurma
Turaba
Mecca
Es Taif
Lith
Kalaat Bisheh
Sandy Desert of Roba-el-Khali
Shammar
Kena
Hail
1
2
3
4
5
40°
35°
30°
25°
20°

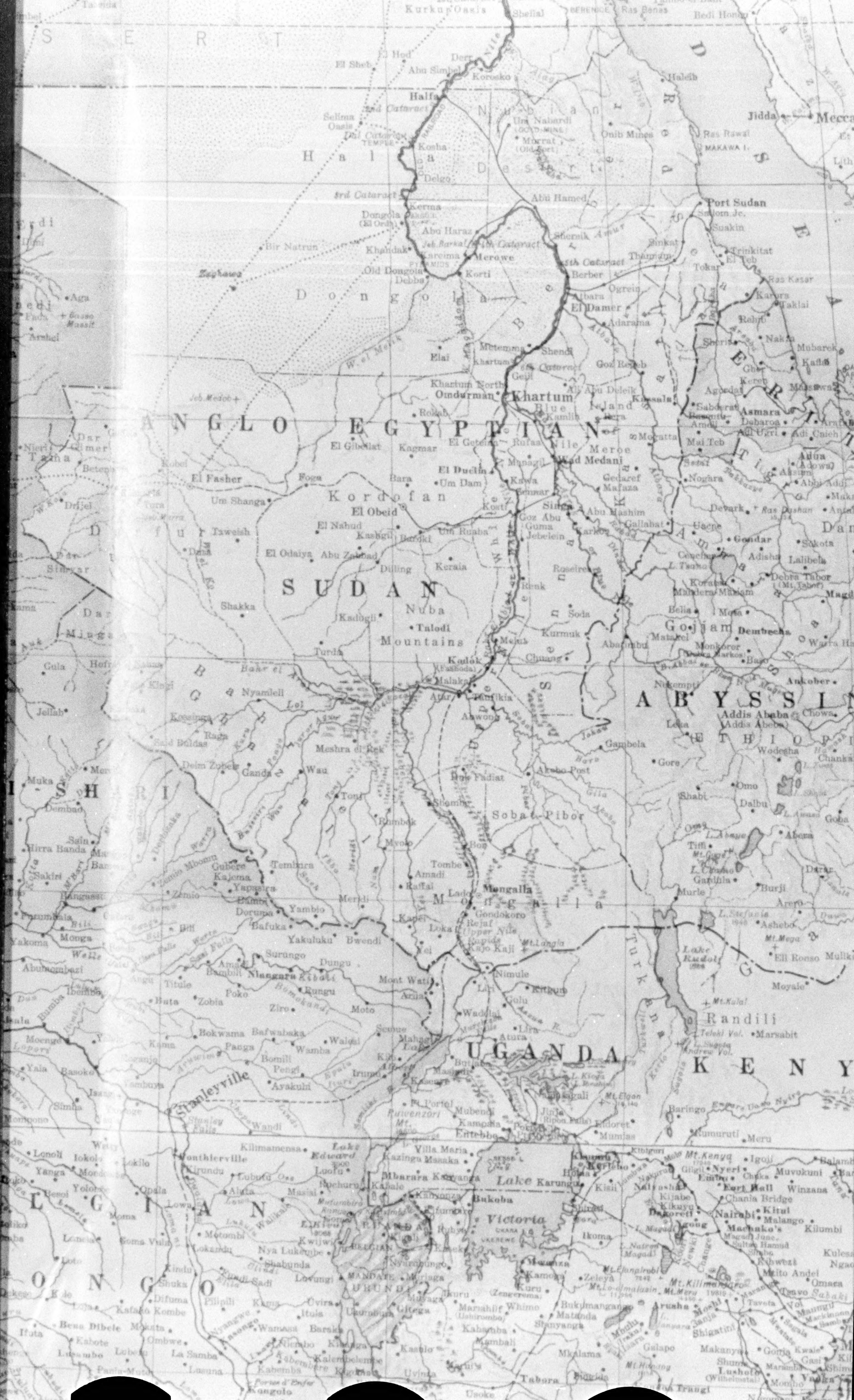
MAURITANIA
SENEGAL
GAMBIA
PORTUGUESE GUINEA
FRENCH GUINEA
SIERRA LEONE
LIBERIA
IVORY COAST
FRENCH
FRENCH
(UPPER SENEGAL
(HAUTE SENEGAL
ASHANTI
El Juf
Great Depression
Desert
(Unknown Desert)
El Hodh
Sahel
Adrar
Tiris
Inghiri
Futa
Bondu
Futa-Jalon
Kaarta
Fuladugu
Beledugu
Manding
Wassulu
Baule
Mossi
Massina
C. Blanco
C. Verde
Dakar
St. Louis
Bathurst
Karabane
C. Roxo
BISSAGOS ISLANDS
ORANGE I.
Victoria
Boffa
Konakry
Freetown
Robertsport
Royesville
Monrovia
Marshall
Edina
Grand Bassa
Greenville
Nana Kru
Sass Town
Harper
Tabu
Berebi
San Pedro
Sassandra
Fresco
Grand Lahu
Bingerville
Grand Bassam
Assini
Half Assini
Axim
Cape Three Points
Cape Coast Castle
Grain Coast
Ivory Coast
Kong
Kankan
Bamako
Timbuktu
Jenne
Mopti
Bandiagara
Kayes
Bakel
Matam
Podor
Dagana
Richard Toll
Nioro
Sokolo
Segu
Sikasso
Bobo Dioulasso
Kumasi
Beyla
Kissidugu
Faranah
Dabola
Dinguiray
Siguiri
Kurussa
Timbo
Labe
Walata
Nema
Tishit
Tidjikja
Atar
Wadan
Taudeni
Arawan
Niger
Senegal
Gambia
Black Volta
Red Bandama
White Bandama
CAPE VERDE IS.
(PORTUGUESE)
ATLANTIC OCEAN
St. Antonio
Ribeira Grande
Praia
Brava
Fogo
Santiago
Boavista
A T L A N T



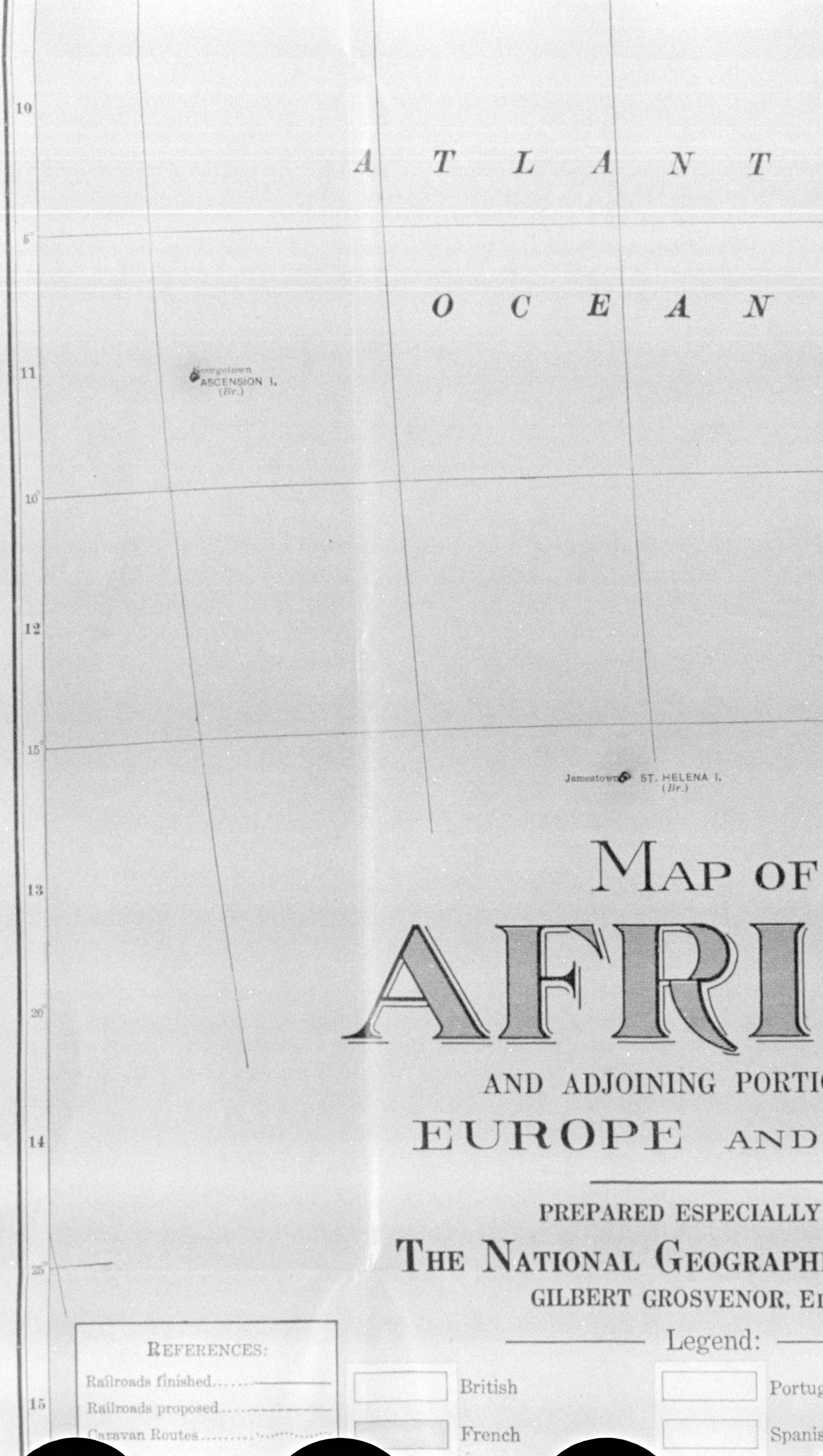
CIVIL TERRITORY OF THE NIGER
W E S T A F R I C A
SUDAN
(NIGER)
UPPER VOLTA
(HAUTE VOLTA)
DAHOMEY
NIGERIA
NORTHERN PROVINCES
SOUTHERN PROVINCES
CAMEROONS
(BRITISH MANDATE)
(FRENCH MANDATE)
TOGOLAND
FRENCH MANDATE
COAST COLONY
ASHANTI
NORTHERN TERRITORIES
RIO MUNI
(Spanish Guinea)
GABON
FRENCH
MIDDLE CONGO
Imoshagh or Tuareg
Tanezruft (Unknown Desert)
Tenere
Kawar Oasis
Tintumma
Teda or Tibbu
Chad Depression
Lake Chad
Kanem
Dagana
Bornu
Adamawa
Air or Asben
Agades
Tagama
Damergu
Zinder
Manga
Timetrin
Azawad
Adrar des Ifoghas
Timbuktu
Gao
Niamey
Say
Wagadugu
Fada N'Gurma
Borgu
Sokoto
Katsina
Kano
Zaria
Bauchi
Yola
Lokoja
Ilorin
Abeokuta
Lagos
Porto Novo
Badagri
Whida
Lome
Kumasi
Accra
Cape Coast Castle
Benin
Calabar
Duala
Buea
Victoria
Yaunde
Ngaundere
Lolodorf
Ebolowa
Kribi
Campo
Bata
Benito
Calatrava
Libreville
Cap Lopez
Ogowe Delta
Fernand Vaz
Sette Kama
Mayumba
Loango
Brazzaville
Njole
Lambarene
Franceville
Slave Coast
Gold Coast
Bight of Benin
Mouths of the Niger
Bight of Biafra
GULF OF GUINEA
Santa Isabel
Clarence Pk. 10190
FERNANDO PO (Spanish)
Sto. Antonio
PRINCE'S I. (PRINCIPE) (Port.)
ST. THOMAS SAO THOME (Port.)
São Thome
ANNOBON (Sp.)
Cameroon Mt. 13,350
T I C

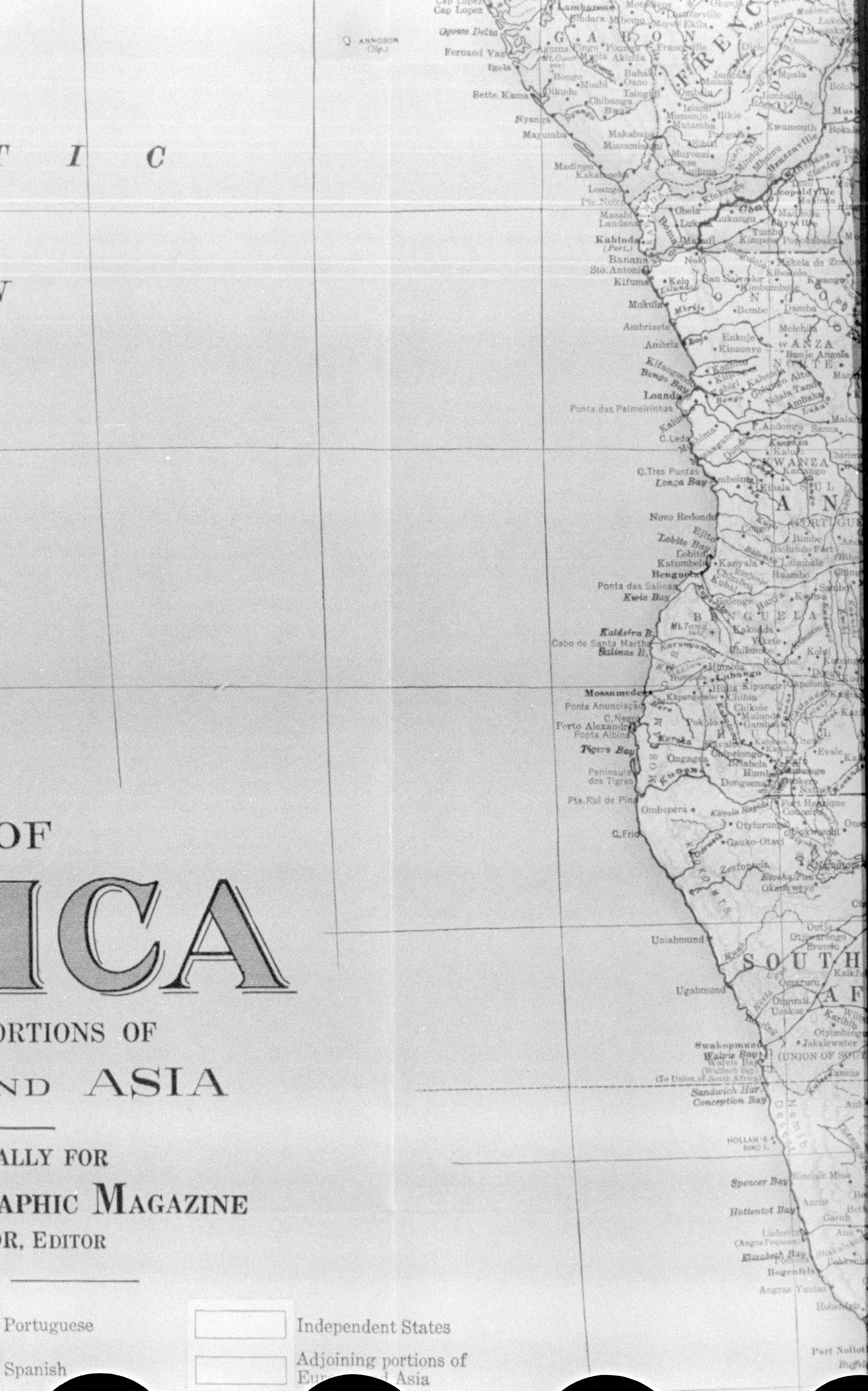
G R E A T D E S E R T
Ahaggar
TIBESTI
Teda or Tibbu
Tenere
Kawar Oasis
Bilma
Air or Asben
A F R I C A
Agades
Tintumma
Agadem
Chad Depression
Bodele
Borku
Ennedi
Erdi
Morcha
TERRITORY OF THE NIGER
Zinder
Manga
Kanem
Lake Chad
Bornu
Kukawa
Dagana
Bagirmi
C H A D
Wadai
Dar Tama
Dar Runga
Dar Sila
Kano
N I G E R I A
NORTHERN PROVINCES
SOUTHERN PROVINCES
Yola
Garua
Adamawa
Ngaundere
CAMEROONS
(BRITISH MANDATE)
(FRENCH MANDATE)
Duala
Victoria
Calabar
Yaunde
Bight of Biafra
Santa Isabel
FERNANDO PO (Spanish)
RIO MUNI
Spanish Guinea
Bata
Libreville
Cap Lopez
G A B O N
Lambarene
Sette Kama
Mayumba
Loango
Pte. Noire
MIDDLE CONGO
FRENCH EQUATORIAL AFRICA
UBANGI-SHARI
Ft. Lamy
Ft. Archambault
Ft. Crampel
Ft. Sibut
Bangui
Zongo
Libenge
Ouesso
Brazzaville
Kwamouth
Coquilhatville
Lisala
Congo
B E L G I A N C O N G O
L. Tumba
L. Leopold II
Leopoldville
Bumba
Banzyville
Yakoma

Tropic of Cancer
Kurkur Oasis
Shellal
Mecca
Jidda
Halfa
2nd Cataract
3rd Cataract
4th Cataract
5th Cataract
6th Cataract
Abu Hamed
Port Sudan
Suakin
Dongola
Merowe
Berber
Atbara
El Damer
Shendi
Khartum
Omdurman
Blue Nile
Kassala
Asmara
Massawa
Adua
Axum
Makalle
Wad Medani
Sennar
El Obeid
El Fasher
Kordofan
ANGLO EGYPTIAN SUDAN
Nuba Mountains
Kodok
Malakal
Gondar
Lake Tsana
Gojjam
Dessie
Ankober
Addis Ababa
ABYSSINIA
ETHIOPIA
Danakil
Gambela
Gore
Harar
Jibuti
Mongalla
Gondokoro
Rejaf
Nimule
Lake Rudolf
Kenya
KENYA
UGANDA
Jubaland
Lake Albert
Lake Edward
Lake Victoria
Ruwenzori
Entebbe
Kampala
Jinja
Mt. Elgon
Mt. Kenya
Nairobi
Machako's
Mt. Kilimanjaro
Moshi
Arusha
Tabora
Mombasa
Stanleyville
Stanley Falls
Ponthierville
Kisumu


ANGLO EGYPTIAN
SUDAN
ABYSSINIA
ETHIOPIA
ERITREA
UGANDA
KENYA
BELGIAN CONGO
Red Sea
Nubian Desert
Dongola
Kordofan
Darfur
Nuba Mountains
Mongalla
Sobat-Pibor
Gojjam
Halfa
Abu Simbel
Korosko
Kosha
Delgo
Kerma
Dongola
Abu Hamed
Merowe
Korti
Old Dongola
Debba
Berber
Atbara
El Damer
Shendi
Metemma
Khartum North
Omdurman
Khartum
Blue Nile
Wad Medani
Kassala
Gedaref
Gallabat
Port Sudan
Suakin
Tokar
Massawa
Asmara
Adua
Gondar
L. Tsana
Dessie
Addis Ababa
El Fasher
El Obeid
Um Shanga
Taweish
El Nahud
Dilling
Kadugli
Talodi
Kodok
Malakal
Renk
Kosti
Singa
Roseires
Kurmuk
Gambela
Akobo Post
Gore
Meshra el Rek
Wau
Tonj
Rumbek
Shambe
Bor
Tombe
Amadi
Lado
Mongalla
Gondokoro
Rejaf
Yei
Kajo Kaji
Nimule
Yambio
Tembura
Raga
Deim Zubeir
Stanleyville
Gulu
Lira
Atura
Butiaba
Masindi
Hoima
Fort Portal
Mubende
Kampala
Entebbe
Jinja
Mt. Elgon
Lake Rudolf
Lake Albert
Lake Edward
Lake Victoria
Bukoba
Mwanza
Kisumu
Nairobi
Mt. Kenya
Nyeri
Fort Hall
Machako's
Mt. Kilimanjaro
Moshi
Arusha
Tabora
Randili
Marsabit
Moyale
Baringo
Mbarara
Kabale
Ruwenzori
Kigoma
Usumbura
Urundi
Kitega

Tropic of Cancer
Mecca
Et Taif
Lith
Khurma
Turaba
Raghdan
Kalaat Bisheh
Sandy Desert of Roba-el-Khali
Kunfuda
Saduan
Es Selail
Khamis Mishet
El Itwed
Sabiyah
Sada
FARSAN IS.
DAHLAK ARCHIPELAGO
DAHLAK IS.
KAMARAN I. (Br.)
Loheia
Mareb
Sana
Hodeida
HANISH IS.
Mocha
Assab
Turba
Aden (Br.)
PERIM I. (Br.)
Str. of Bab el Mandeb
Shukra
Hauta
Bir Ali
Makalle
Raida
Terim
W. Hadramaut
Shibam
Karrain
J. Fartak 2403
Ras Fartak
Kamar Bay
Merbat
Hasik
Kuria Muria Bay
KURIA MURIA IS. (Br.)
GULF OF ADEN
SOCOTRA (Br.)
Tamarida
ABD-EL-KURI
BROTHERS
Bender Alula
Bender Merait
Bereda
C. Guardafui
Darim Ogale
Bargal
Jeran
SULT. OF MIJURTINI
Hafun N. Bay
Ras Hafun
Hafun
Las Khorai
Las Mosa
Bender Ziada
Bihen
Biliyu
Mie
Karam
Bulhar
Berbera
Ada
SOMALILAND PROTECTORATE (British)
Hargeisa
Burao
Aldagalla
Kirrit
Gibdali
Hudin
Bohotle
FRENCH SOMALILAND
Jibuti
Obok
Tajura
Zeila
Lahadu
Harag Jid
Gobad
Danakil
Dire Dawa
Gildessa
Jig Jiga
Harar
Bubassa
Awari
Daror
Sesebani
Warandab
Marodile
Gherlogubi
Galadi
Gallakayo
Gurbo
Faf
Hilowen
Bari
Ras Maber
Darimo
Mogal
Gurane
Band el D'Agna (Negro Bay)
Illigh
Domario
Gara
Ras Gared
Semadde
Eldanane
Dangot
Dihic
Obbia
Elhur
SULT. OF OBBIA
NOGAL TERR.
SOMALILAND
ITALIAN SOMALILAND
SOUTH ITALIAN SOMALILAND
Kine
El Bur
Faf
Harardere
Meregh
Boholo
Meghed
Mahaddei Wen
Itala
Warsheikh
Mogadishu (Mogadiscio)
Balad
Afgoi
Merka
Jilib
Brava
Webi Shebeli
Belet Wen
Uddur
Bulo Burti
Lugh
Isola Baidoa
Burakaba
Bardera
Dolo
Bahat Woladeyi
Juba land
El Wak
Alessandra
Jelib
Margherita
Afmadu
Kismayu (Chisimaio)
Jumbo (Giumbo)
Port Durnford
Kakata
Hola
Witu
Lamu
Kipini
Formosa Bay
Malindi
Takaungu
Mombasa
Kilindini
Lorian Swamp
INDIAN
SEYCHELLES IS. (Br.)


A T L A N T
O C E A N
Georgetown
ASCENSION I.
(Br.)
Jamestown
ST. HELENA I.
(Br.)
MAP OF
AFRI
AND ADJOINING PORTI
EUROPE AND
PREPARED ESPECIALLY
THE NATIONAL GEOGRAPH
GILBERT GROSVENOR, E
Legend:
British
French
REFERENCES:
Railroads finished
Railroads proposed
Caravan Routes



T I C
OF
ICA
ORTIONS OF
ND ASIA
ALLY FOR
APHIC MAGAZINE
OR, EDITOR
Portuguese
Spanish
Independent States
Adjoining portions of
Europe and Asia
ANNOBON (Sp.)
GABON
FRENCH
CONGO
KWANZA NORTE
KWANZA SUL
PORTUGUESE
BENGUELA
SOUTH
(UNION OF SOUTH
Namib Desert
Cap Lopez
Lambarene
Ogowe Delta
Fernand Vaz
Sette Kama
Nyanga
Mayumba
Madingo
Loango
Pte. Noire
Landana
Kabinda (Port.)
Banana
Sto. Antonio
Kifuma
Mukula
Ambrizete
Ambriz
Bengo Bay
Loanda
Ponta das Palmeirinhas
C. Ledo
C.Tres Puntas
Longa Bay
Novo Redondo
Lobito Bay
Lobito
Katumbela
Benguela
Ponta das Salinas
Kwio Bay
Kaldeira B.
Cabo de Santa Martha
Salinas B.
Mossamedes
Ponta Anunciação
C. Negro
Porto Alexandre
Ponta Albina
Tigers Bay
Peninsula dos Tigres
Pta. Rui de Pina
C. Frio
Uniabmund
Ugabmund
Swakopmund
Walvis Bay
Sandwich Har.
Conception Bay
HOLLAM'S BIRD I.
Spencer Bay
Hottentot Bay
Luderitz (Angra Pequena)
Elizabeth Bay
Bogenfels
Angras Yuntas
Port Nolloth
Leopoldville
Brazzaville
San Salvador
Bailundo Fort
Huambo
Lubango
Humbe
Port Henrique
Otjiwarongo
Omaruru
Karibib
Usakos

ANGOLA
(PORTUGUESE WEST AFRICA)
SOUTH WEST AFRICA
(UNION OF SOUTH AFRICA MANDATE)
BECHUANALAND PROTECTORATE
Kalahari Desert
Bechuanaland
KWANZA NORTE
KWANZA SUL
BENGUELA
MOSHIKO
KUBANGO
LUNDA
HUILA
MOSSAMEDES
CONGO
GABON
MIDDLE CONGO
Loanda
Benguela
Mossamedes
Lobito
Ambriz
Kabinda
Banana
Novo Redondo
Porto Alexandre
Swakopmund
Walvis Bay
Sandwich Har.
Conception Bay
Spencer Bay
Hottentot Bay
Luderitz
Elizabeth Bay
Bogenfels
Port Nolloth
Windhuk
Keetmanshoop
Grootfontein
Tsumeb
Outjo
Okahandja
Rehoboth
Gibeon
Bethany
Etosha Pan
Kimberley
Vryburg
Mafeking
Upington
Postmasburg
Leopoldville
Brazzaville
Matadi
Boma
Loango
Mayumba
Sette Kama
Cap Lopez
Fernand Vaz
Lambarene
States
tions of
sia

TANGANYIKA TERRITORY
(BRITISH MANDATE)
NORTHERN RHODESIA
SOUTHERN RHODESIA
NYASALAND PROTECTORATE
MOZAMBIQUE
COMPANHIA DO NYASA
MOZAMBIQUE (PORTUGUESE)
PORTUGUESE EAST AFRICA
KILIMANE
MOZAMBIQUE CHANNEL
ZANZIBAR PROTECTORATE
TRANSVAAL
ORANGE FREE STATE
UNION OF SOUTH AFRICA
SWAZILAND
ZULULAND
BASUTOLAND
Lake Victoria
Zambezi
Dar-es Salaam
Zanzibar
Mombasa
Tabora
Dodoma
Bagamoyo
Kilwa Kivinje
Kilwa Kisiwani
Lindi
Mikindani
Mozambique
Porto Amelia
Ibo
Quelimane
Chinde
Beira
Sofala
Inhambane
Lourenço Marques
Delagoa Bay
Salisbury
Bulawayo
Victoria
Umtali
Tete
Fort Jameson
Blantyre
Zomba
Elizabethville
Broken Hill
Livingstone
Pretoria
Johannesburg
Pietersburg
Bloemfontein
Pietermaritzburg
Durban
Mafeking
St. Lucia Bay
BAIXO DA JUDIA
EUROPA I.
BAZARUTO
MAFIA I.
NOTE–The British tr...
expressing the English ...
respective colonies.
The English equivale...
In French and Belgian de...
w before a vowel...

TANGANYIKA TERRITORY
(BRITISH MANDATE)
NORTHERN RHODESIA
SOUTHERN RHODESIA
NYASALAND PROTECTORATE
MOZAMBIQUE
SOUTH AFRICA
TRANSVAAL
ORANGE FREE STATE
Lake Victoria
Johannesburg
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Dar-es
Zanzibar
Beira
Lourenço Marques
Delagoa Bay
Pietermaritzburg
Durban
Bloemfontein
Kimberley
Mafeking
Tabora
Dodoma
Lusaka
Livingstone

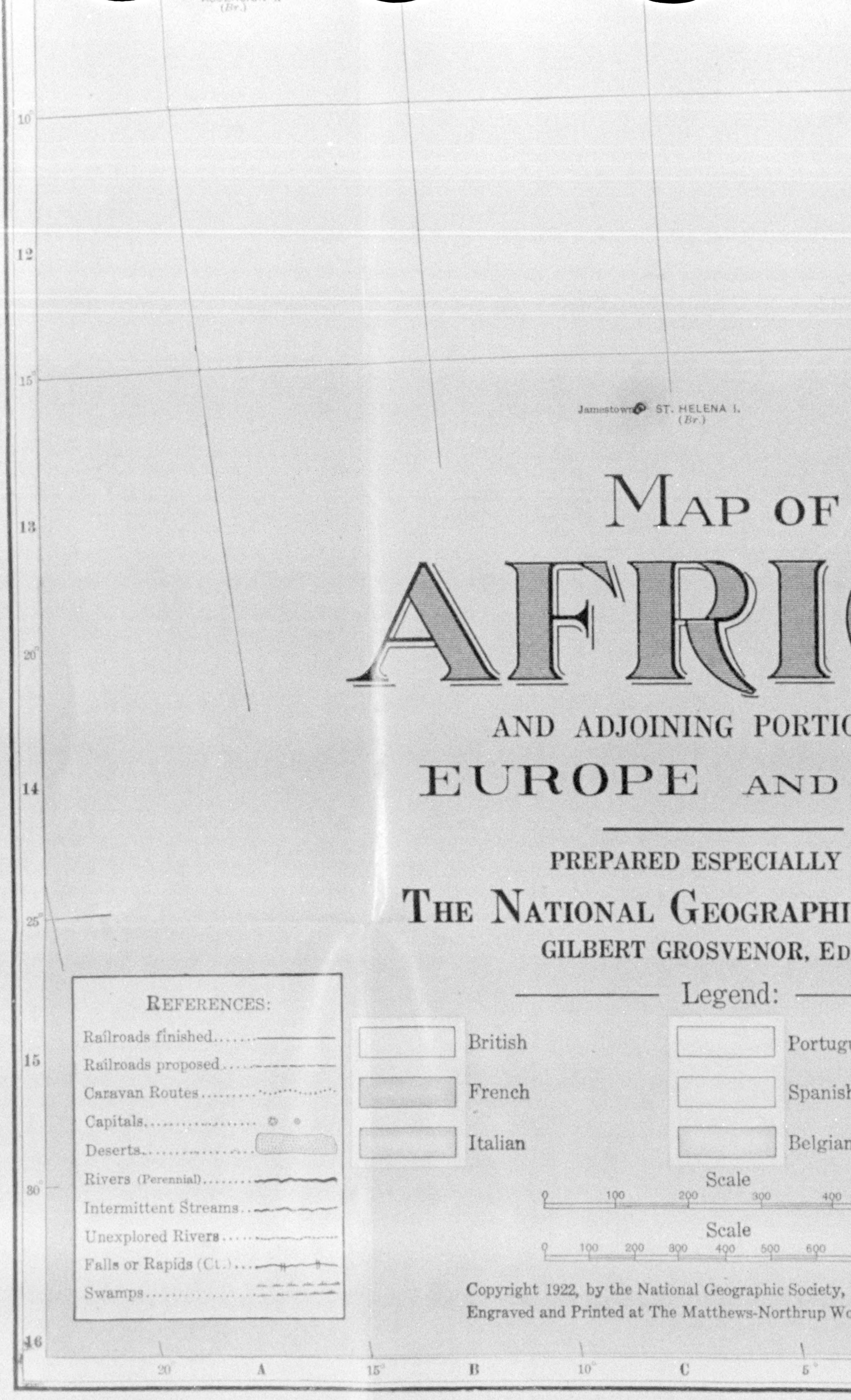
NOTE–The British transliteration system has been used in the spelling of native names, and in expressing the English sound equivalents of the French, Italian and Portuguese spellings in their respective colonies.

The English equivalents for sounds, as applied on this map, are as follows :

In French and Belgian dependencies: w before a vowel=o... in other cases u=ou; u endi... j=dj;

In Italian dependencies: w before a vowel=u; k before e or i=ch; elsewhere k=c; j before ... be-

In Portuguese dependencies; w before a vowel=u; k before e or i=qu; k before a, o, u=c; ny...


Jamestown ST. HELENA I.
(Br.)
MAP OF
AFRI
AND ADJOINING PORTIO
EUROPE AND
PREPARED ESPECIALLY
THE NATIONAL GEOGRAPHI
GILBERT GROSVENOR, ED
Legend:
British
French
Italian
Portugu
Spanish
Belgian
REFERENCES:
Railroads finished
Railroads proposed
Caravan Routes
Capitals
Deserts
Rivers (Perennial)
Intermittent Streams
Unexplored Rivers
Falls or Rapids (Ct.)
Swamps
Scale
0 100 200 300 400
Scale
0 100 200 300 400 500 600
Copyright 1922, by the National Geographic Society,
Engraved and Printed at The Matthews-Northrup Wo
10°
12
15°
13
20°
14
25°
15
30°
16
20°
A
15°
B
10°
C
5°

OF

...ICA

...RTIONS OF

...ND ASIA

...ALLY FOR

...APHIC MAGAZINE

...R, EDITOR

Portuguese	Independent States
Spanish	Adjoining portions of Europe and Asia
Belgian	

Mandated Areas are shown by colored stripes.

Elevations are given in English feet.

400 500 English Statute Miles

600 700 800 Kilometers

Society, Washington, D. C.

...rthrup Works, Buffalo, N. Y.

5° D 0° E 5° F 10 G 15°

ANGOLA
(PORTUGUESE WEST AFRICA)
BENGUELA
LUNDA
MOSHIKO
KUBANGO
SOUTH WEST AFRICA
(UNION OF SOUTH AFRICA MANDATE)
BECHUANALA
PROTECTORAT
Desert
Bechuanaland
CAPE OF GOOD
UNION OF
Loanda
Benguela
Mossamedes
Swakopmund
Walvis Bay
Lüderitz
Port Nolloth
Cape Town
Windhuk
Kalahari
Namib Desert
nt States
portions of
d Asia
own by colored stripes.
English feet.
5°
F
10°
G
15°
H
20° Longitude
J
East
25°

NORTHERN RHODESIA
NYASALAND PROTECTORATE
SOUTHERN RHODESIA
MOZAMBIQUE (PORTUGUESE EAST AFRICA)
COMPANHIA DO NYASA
MOZAMBIQUE
KILIMANE
GAZA
NYAMBANE
TRANSVAAL
ORANGE FREE STATE
SOUTH AFRICA
NATAL
ZULULAND
SWAZILAND
BASUTOLAND
GOOD HOPE
Elizabethville
Fort Rosebery
Broken Hill
Lusaka
Kafue
Feira
Zumbo
Tete
Fort Jameson
Blantyre
Zomba
Chiromo
Port Herald
Fort Johnston
Livingstone
Bulawayo
Salisbury
Umtali
Victoria
Gwelo
Francistown
Serowe
Palapye Road
Mafeking
Pretoria
Johannesburg
Germiston
Pietersburg
Middelburg
Bloemfontein
Kimberley
Maseru
Ladysmith
Pietermaritzburg
Durban
(Port Natal)
Port Shepstone
Port St. Johns
East London
King Williams Town
Port Alfred
Port Elizabeth
Algoa Bay
Grahamstown
Queenstown
Umtata
Lourenço Marques
Delagoa Bay
St. Lucia Bay
Inhambane
Beira
Sofala
Chinde
Kilimane
Mozambique
Porto Amelia
Pemba Bay
Ibo
Lindi
Mikindani
Kilwa Kivinje
Kilwa Kisiwani
Bazaruto I.
Europa I.
Baixo da Judia
Tulear
NOTE—The British
expressing the English
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The English equivale
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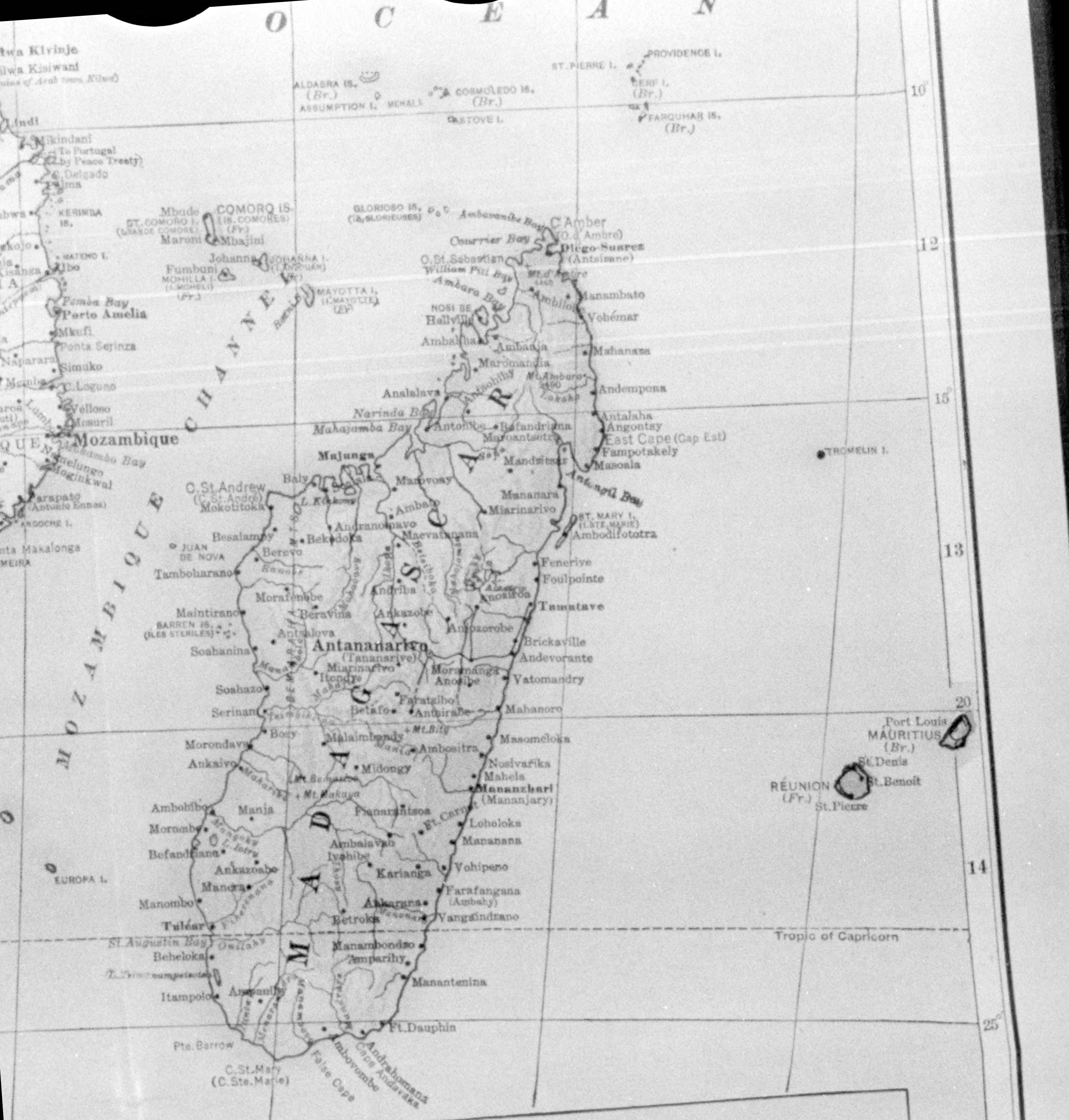
u=ou; u ending a name=
ch=tch; sh=ch; gi=gui
s=ss.
Ain . . . . Spring
Areg . . . . Dune Region
Bahr . . . . River
Bir . . . . Deep Well
Bosch . . . . Bush
Bu . . . . Father
Daal . . . . Valley
Daia . . . . Marsh Land
25° from K Greenwich 30° L 35° M 40° N 45°

NORTHERN
RHODESIA
SOUTHERN
RHODESIA
NYASALAND PROTECTORATE
MOZAMBIQUE
PORTUGUESE EAST AFRICA
COMPANHIA DO NYASA
BECHUANALAND PROTECTORATE
Kalahari
Desert
TRANSVAAL
ORANGE FREE STATE
UNION OF SOUTH AFRICA
CAPE OF GOOD HOPE
NATAL
ZULULAND
SWAZILAND
BASUTOLAND
Elizabethville
Broken Hill
Lusaka
Livingstone
Bulawayo
Salisbury
Fort Jameson
Zomba
Blantyre
Tete
Beira
Sofala
Quelimane
Chinde
Pretoria
Johannesburg
Germiston
Pietersburg
Mafeking
Kimberley
Bloemfontein
Maseru
Ladysmith
Pietermaritzburg
Durban
Port Shepstone
Lourenço Marques
Delagoa Bay
St. Lucia Bay
East London
Port Alfred
Port Elizabeth
Algoa Bay
Mossel Bay
King Williams Town
Queenstown
Umtata
Port St. Johns
Inhambane
Bazaruto
Baixo da Judia
Zambezi
Limpopo
Great Makarikari Salt Lake
J East 25° from K Greenwich 30° L 35° M 40°



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In Italian dependencies: w before a vowel=u; k before e or i=ch; elsewhere k=c; j before a, o, u=gi. j before e or i=g; y=i; j ending a name =g; k ending a name=ch.

In Portuguese dependencies: w before a vowel=u; k before e or i=qu; k before a, o, u=c; ny=nh; j=g; x=sh; z=ç; s between vowels=ss.

Translations

Ain	Spring	Dorp	Village	Kop	Hill	Spruit	Spring, Stream
Areg	Dune Region	Drift	Ford	Kraal	Native Village	Stad	Town
Bahr	River	Fontein	Spring	Kuil	Pit or Gap	Stroom	Stream
Bir	Deep Well	Hammada	Rocky Plateau	Nek, Poort	Opening	Veld	Open Plain
Bosch	Bush	Hassi	Well	Ras	Cape	Vlei	Hollow filled with water in rainy season
Bu	Father	Karroo	District	Rust	Rest	Wadi	Periodical River
Daal	Valley	Kasba, Kasr, Ksar	Fortification	Sebkha	Salt Marsh		
Daia	Marsh Land			Shott	Salt Lake		

XUM

GREAT FOR BREAKFAST—GOOD, HOT SOUP

If you came down from your home town
To visit Campbell's farms
Your eyes would dance with every glance
At fields just filled with charms!

Acres and acres of the finest tomatoes that grow!

Stretching away as far as the eye can reach! On the great Campbell's farms in fertile New Jersey, the tomato is developed to its full perfection. Vast crops are grown. Seeds from perfected fruit are planted in thousands of acres which yield their luscious harvest to

Campbell's Tomato Soup

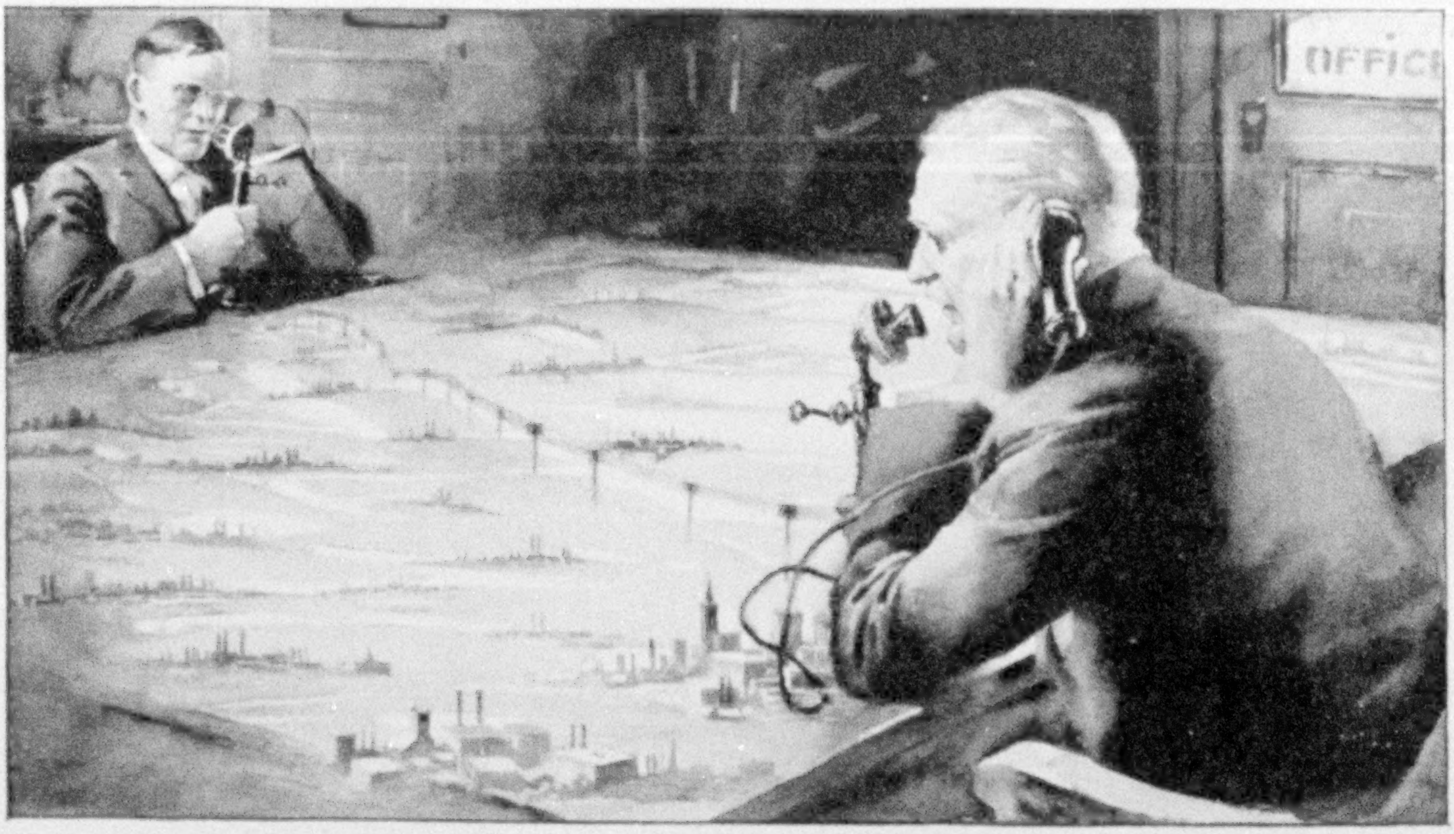
It is made with this juicy red-ripe flawless fruit, sun-ripened on the vines. Just the pure tonic juices and rich fruity parts strained to a fine, smooth puree enriched with golden butter and spiced to a delicious nicety by the famous Campbell's chefs. What a treat for your appetite!

21 kinds   12 cents a can

Campbell's Soups

LOOK FOR THE RED AND WHITE LABEL

XUM



As if across a desk

"New York is calling!" says the operator in San Francisco. And across the continent business is transacted as if across a desk.

Within arm's length of the man with a telephone are seventy thousand cities, towns and villages connected by a single system. Without moving from his chair, without loss of time from his affairs, he may travel an open track to any of those places at any time of day or night.

In the private life of the individual the urgent need of instant and personal long distance communication is an emergency that comes infrequently—but it is imperative when it does come. In the business life of the nation it is a constant necessity. Without telephone service as Americans know it, industry and commerce could not operate on their present scale. Fifty per cent more communications are transmitted by telephone than by mail. This is in spite of the fact that each telephone communication may do the work of several letters.

The pioneers who planned the telephone system realized that the value of a telephone would depend upon the number of other telephones with which it could be connected. They realized that to reach the greatest number of people in the most efficient way a single system and a universal service would be essential.

By enabling a hundred million people to speak to each other at any time and across any distance, the Bell System has added significance to the motto of the nation's founders: "In union there is strength."

"BELL SYSTEM"

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND ASSOCIATED COMPANIES

One Policy, One System, Universal Service, and all directed toward Better Service

The Gem Expert sees flaws which an unpracticed eye rarely detects. His appraisals are accepted because he has specialized on the comparative values of precious stones. His experienced judgment rightly carries weight.

Weighing Values—
for the Investor

As the gem expert appraises precious stones, the bond expert weighs and judges bonds. You cannot expect to arrive at sound conclusions single-handed.

The National City Company's complete investment organization in 50 leading cities, and its years of specialized experience, are at your service.

The security back of every bond we offer has been carefully weighed and judged by our officers. We would welcome an opportunity to help you select bonds for the investment of your funds.

THE NATIONAL CITY COMPANY
NATIONAL CITY BANK BUILDING
NEW YORK

BONDS
SHORT TERM NOTES
ACCEPTANCES

The National City Company
National City Bank Building, New York
Offices in more than 50 leading cities throughout the World

XUM

A LIVING MONUMENT TO QUALITY

As this is written,* the whistles of the Goodyear factories are sounding in celebration of the 45,000,000th pneumatic motor vehicle tire made by this company.

Pause just a moment, and reflect upon that figure.

To the statistician it stands as the greatest total yet attained by any maker of tires in the world.

To the man who views it in its larger meaning it suggests a great deal more.

* * *

Forty-five millions of tires bearing the Goodyear name!

Of what errands these tires have sped—how nimbly they have run to pleasure, how sturdily to war, how willingly under burdens, how slowly on solemn journeys—nothing need here be said.

But is not something demanded to be said of the character of manufacture and dealing that can win from the public so profound a confidence?

Is not something demanded to be said also of the character of a product that over many years can earn and hold and justify such an immense Good Will?

* * *

If behind the first Goodyear Tire ever made there had not been a clear and enlightened purpose, this record production never would have been possible.

If this purpose had not been conceived in the highest public interest, Goodyear could not be what Goodyear is today.

If every day of every year this purpose had not been scrupulously served, the leadership long enjoyed by Goodyear could not have endured.

How well it has been served, and with what energy and conscience, is seen best in the fact that more people ride on Goodyear Tires than on any other kind.

* * *

It is a splendid thing to have meant, to an entire generation of men, what has always and everywhere been regarded as unqualifiedly fine.

It is a satisfying thing to have set for an immense industry a standard for integrity of manufacture, and for honesty of dealing with the public.

It is a gratifying thing to have seen the tradition of quality take form, shaping an industry into an institution, and commanding the loyalty of men.

It is a great thing to have a real purpose, by which to live and work, for that is to embody in everything you build the priceless thing called character.

*June 8, 1922

Goodyear Means Good Wear

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

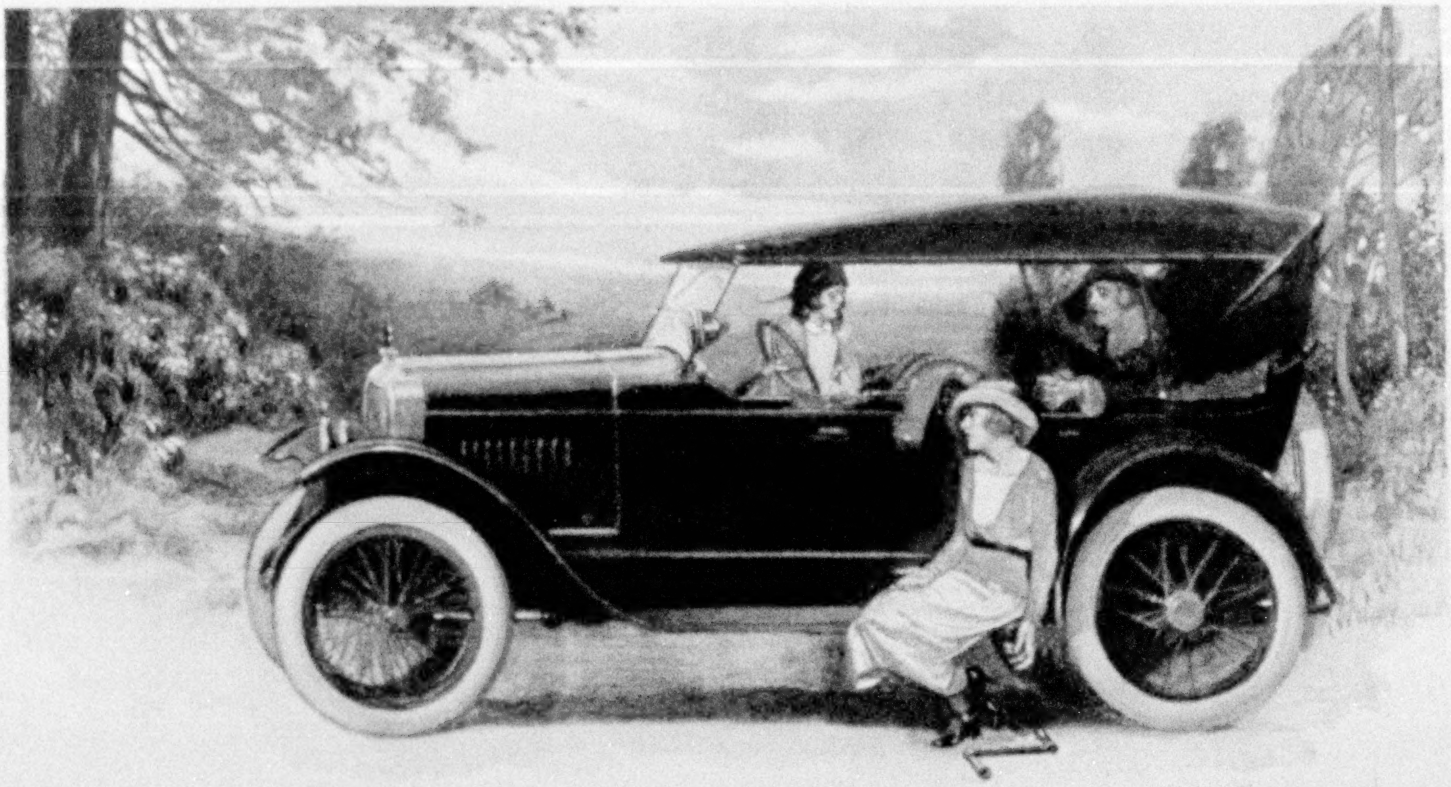
Guests in "Quality Street"

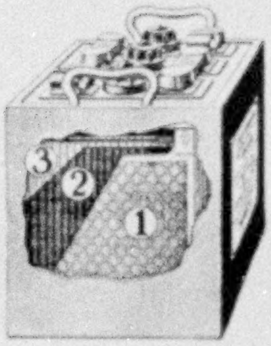
Guests in "Quality Street" greet Whitman's quality group of distinguished candy packages as welcome friends.

In any social gathering they give an added sense of sociability. There's magic in eating together. There's conversation stimulated whenever the hostess produces the Sampler, Salmagundi, Pleasure Island, or any others of the favorites in "The Quality Group."

STEPHEN F. WHITMAN & SON, Inc.
Philadelphia, U. S. A.

Whitman's
Chocolates





Cranking a car— "No Business for a Lady"

—or a man either for that matter. And in tight places—on lonely roads or traffic-jammed streets—safety itself *demands* the never-failing, dependable power of a Philco Battery.

That's why thousands of motorists today are replacing the ordinary batteries that "came with their cars," with long-life power-packed Philco Batteries.

The Philco Battery is chock full of pent-up power, fairly itching to crank the stiffest engine; to place a hot, fat spark on the tip of each plug; to project a flood of white light through the lamps; to put the voice of authority in the horn.

Then why worry along with just an ordinary battery? Put a long-life Philco in your car NOW and *avoid* needless trouble and expense. Its first cost will be no more—and you'll be amazed how much less it costs you per month of service.

The Philco Slotted-Retainer Battery, with its famous diamond-grid plates, is guaranteed for two years—both by maker and dealer. But Philco Batteries usually far outlast their guarantees.

Philco Battery Service Stations specialize in long-life for batteries. No matter what make of battery is now in your car, a Philco Battery Man will help you keep it going, for the longest possible time.

Philadelphia Storage Battery Co., Philadelphia

The famous Philco Slotted-Retainer Battery is the Standard for electric passenger cars and trucks, mine locomotives, and other high-powered, heavy-duty battery service.

3-Point Superiority

1. **The Famous Diamond-Grid**—the diagonally braced frame of a Philco plate. Built like a bridge. Can't buckle—can't warp—can't short-circuit. Double latticed to lock active material (power-producing chemical) on the plates. Longer life. Higher efficiency.

2. **The Philco Slotted Rubber Retainer**—a slotted sheet of hard rubber. Retains the solids on the plates but gives free passage to the current and electrolyte. Prevents plate disintegration. Prolongs battery life 41 per cent.

3. **The Quarter-Sawed Hard-Wood Separator**—made only from giant trees 1,000 years old; quarter-sawed to produce alternating hard and soft grains. Hard grains for perfect insulation of plates. Soft grains for perfect circulation of acid and current—quick delivery of power. Another big reason why Philco is the battery for your car.

LOOK FOR THIS SIGN

of better battery service. Over 5,000 stations—all over the United States.

PHILADELPHIA DIAMOND GRID BATTERY

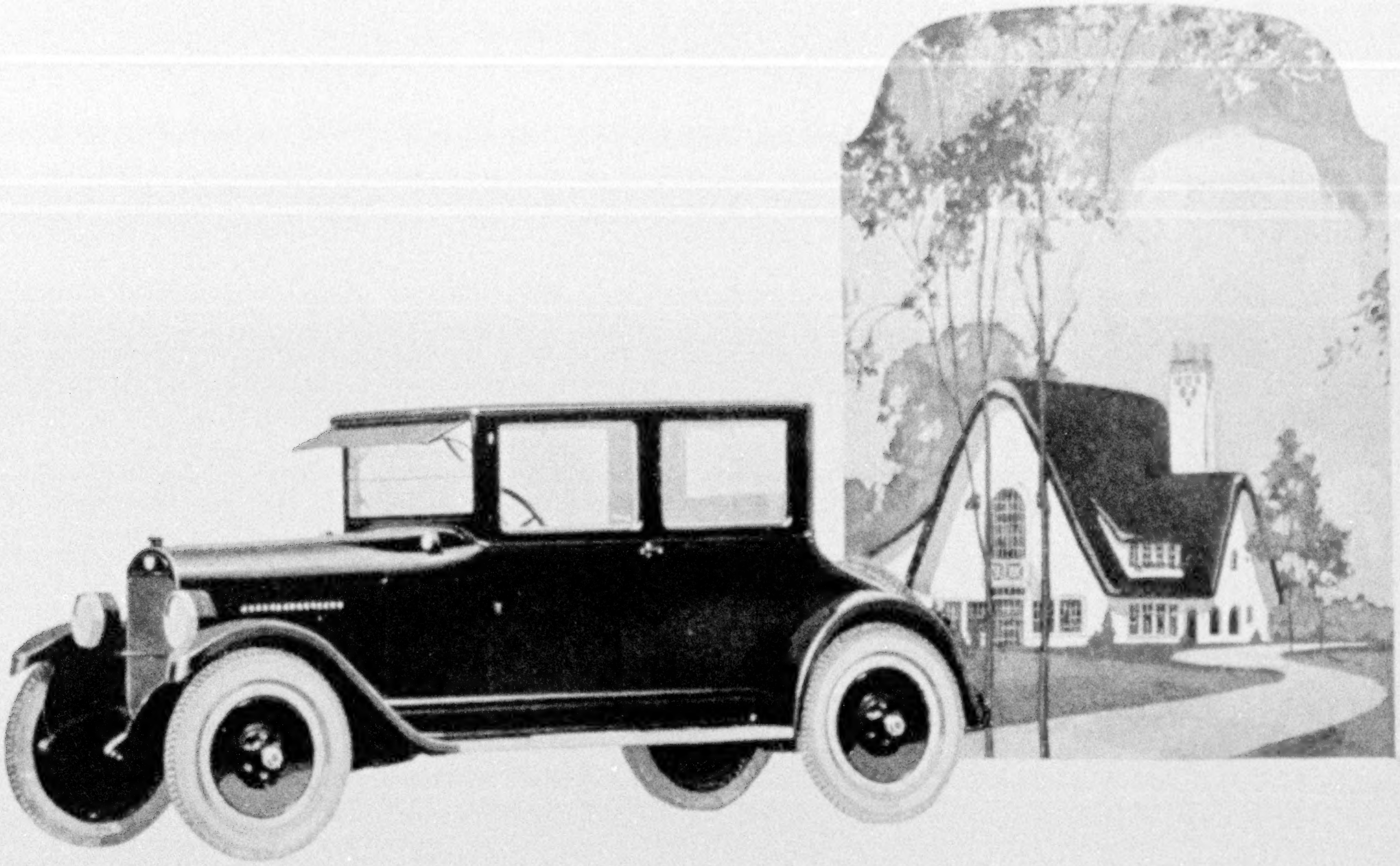
With the PHILCO Slotted Retainer

PHILCO

SLOTTED-RETAINER

BATTERIES

with the famous shock-resisting Diamond-Grid Plates



The good Maxwell is today generally recognized as absolutely alone in the value it offers.

The beauty which sets it apart and in a class by itself is no more unusual than the greater value it reveals in all that makes a motor car desirable.

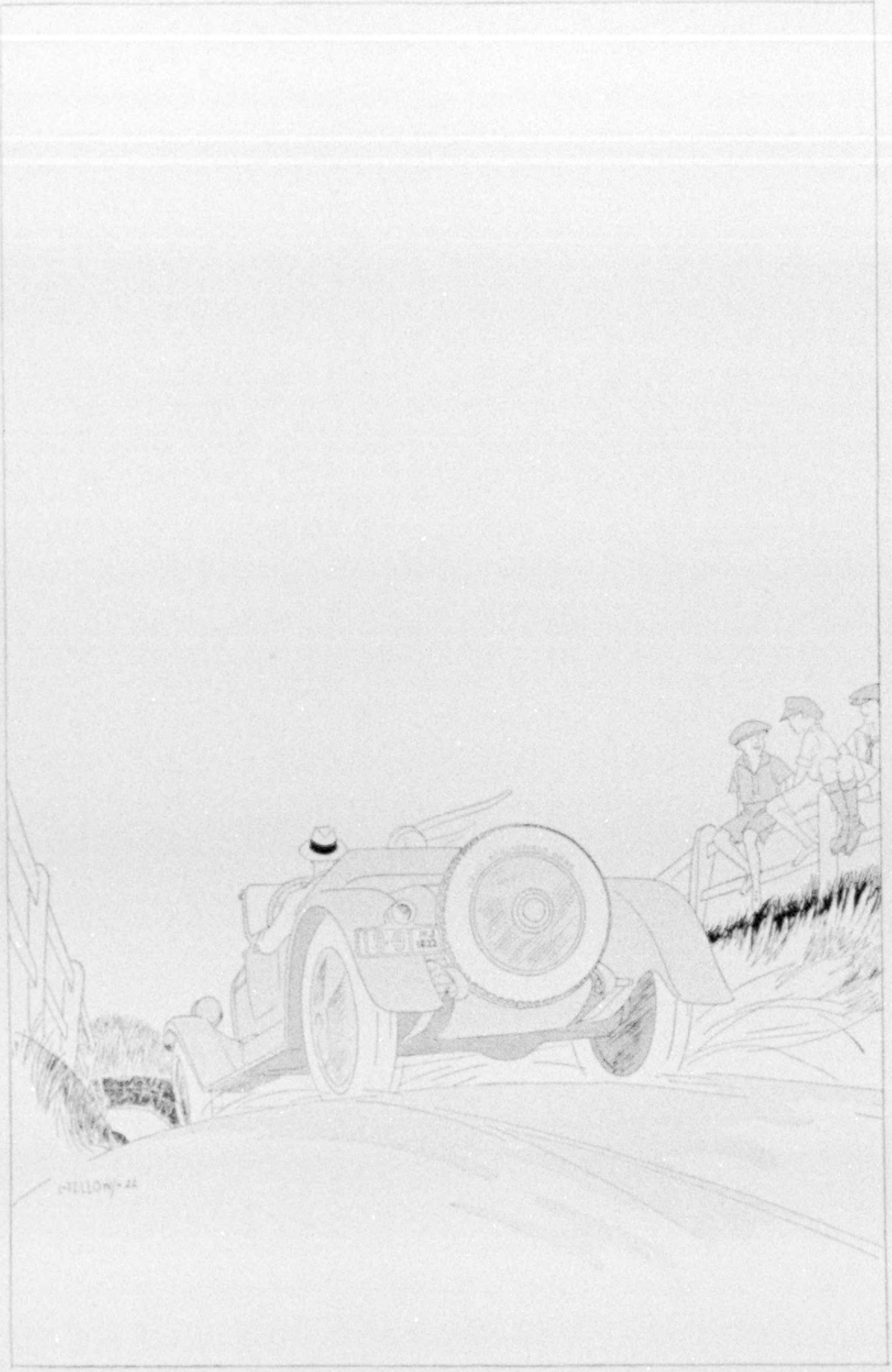
Cord tires, non-skid front and rear; disc steel wheels, demountable at rim and at hub; drum type head and parking lamps; windshield cleaner; rear-view mirror; dome and instrument board lights; Alemite lubrication; motor-driven electric horn; unusually long springs; deep, wide, roomy seats; broadcloth upholstery; clutch and brake action, steering and gear shifting, remarkably easy.

MAXWELL MOTOR CORPORATION, DETROIT, MICH.
MAXWELL MOTOR CO., OF CANADA, LTD., WINDSOR, ONT.

The Good

MAXWELL

XUM



"Betcha nickel he skids into the fence when he hits that wet curve, Jimmy."
"Take his bet, Jimmy—that feller's driving on Kelly-Springfield Kant-Slip Cords."

THE fact that Kelly-Springfield Kant-Slip Cords hold the road is only one reason why you see so many of them on cars today. Even the old Kelly Cords, which cost more than other tires and which lacked the present extraordinarily efficient non-skid tread, achieved such a reputation for big mileage that we had no difficulty in selling all we could make. In the Kant-Slip Cord the non-skid feature has been developed to an extent that makes this tire incomparably the best we have ever built —*and the mileage is still there.* Best of all, it now costs *no more* to buy a Kelly.

This Scientific Test Made at Carnegie Institute
THIS beaker is reproduced from a photograph that was made at the Carnegie Institute of Technology.
It is actual size, and contains 175 cubic centimeters (11 cubic inches) of rich demulcent lather of shaving consistency, which specialists in physical science obtained from half an inch of Colgate's Rapid-Shave Cream, as pressed from the tube.
(No wonder a half inch of this cream is more than enough for a shave.)
After an impartial scientific investigation these facts were established:
(1) Colgate's Rapid-Shave Cream takes up an unbelievable amount of water, and turns it into lather instantly.
(2) The extra moisture in this copious lather makes it wonderfully effective in softening the beard.
(3) Colgate's Rapid-Shave Cream makes shaving easier, and it leaves the face smooth and soothed.
Colgate's Rapid-Shave Cream is better than you thought a shaving cream could be
Mail this paragraph, with your name and address and we will send you a free tube containing cream enough for fifteen shaves, so that you may know how much better Colgate's Rapid-Shave Cream is than any other shaving cream you have ever used.
COLGATE & CO. Dept. 66 199 Fulton St., New York
1
2
½ Inch of RAPID-SHAVE CREAM made all this Lather
This is the actual size of a beaker of lather made from half an inch of Colgate's Rapid-Shave Cream.
RAPID-SH
CREAM
It takes the smart out of shaving and puts it in your appearance—

FROM A GRAFLEX NEGATIVE

GRAFLEX

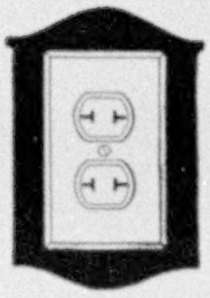
Indoors or out, the Graflex way is a *sure* way of getting good pictures. You *know* when the focus is sharp, you *see* what the view includes because the reflecting mirror shows a big right-side-up image of the subject. Ample exposure is facilitated: at any speed from 1/10 to 1/1000 of a second the focal plane shutter admits an extraordinary amount of light. And the Kodak Anastigmat lens *f.4.5* assures sharp definition, another characteristic of Graflex prints.

"The Graflex Baby Book"—by mail on request

Eastman Kodak Company

Folmer & Schwing Department Rochester, N.Y.

Must You Move the Chair? —Or Just the Lamp?



The G-E Twin Convenience Outlet is a G-E Wiring Device which is considered a necessary part of really good wiring work.

YOU may be living in a "wired house"—but is it *completely* wired—are you enjoying *real* electrical convenience? Do you always connect a portable lamp *just* where you want it? In any part of a room; in any room in your house?

YOU can, if you have real electrical convenience—and you may have many other comforts, too. You may use several electrical appliances at the same time if you have a sufficient number of outlets—a fan with your electric iron; a toaster while the coffee-percolator is "perking"; a massage vibrator and a portable heater.

AND your convenience requires switches, as well; one at the door of every room, two in larger rooms, one for the front porch, for the back porch, for the garage, for the cellar lights.

IT is these little touches of electrical convenience that make a home. They cost little more than makeshift wiring and may be installed with little trouble in your present home or in one being planned.

A New Booklet for Home Lovers

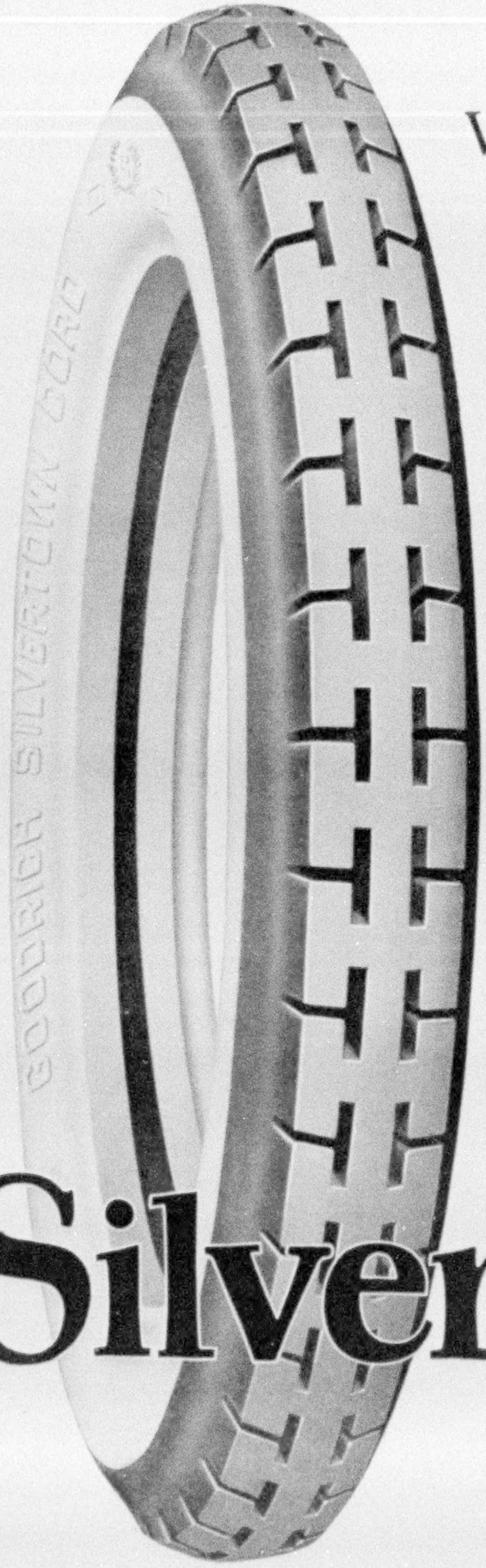
How to secure this electrical convenience in each room of your house is told in detail in a booklet prepared for you. This booklet will be sent you free, together with the name of a nearby electrical contractor qualified to assist you in planning adequate electrical convenience for your home. And if you now own your home you can have the work done on an easy payment plan, just as you buy a piano or phonograph.

If you own or rent a home, or ever expect to, you will find this booklet well worth reading. Address Section N, Merchandise Department, General Electric Company, Bridgeport, Conn.

What Is Your Address?

General Electric Company

General Office Schenectady, N.Y. — Sales Offices in all large cities — 41-181



Why the Silvertown is preferred

[1]

The Silvertown is the pioneer cord tire of America. Its history is the record of every important development in cord tire construction. From the start it gave the motorist a new idea of tire service.

[2]

The Silvertown is made by an organization with 52 years' experience in rubber manufacture. This experience covers the whole development of the automobile, and is put to its most expert use in making the Silvertown.

[3]

There is only one quality in Silvertown Tires. The materials and workmanship in one are the same as in all others. The name of Silvertown is always a symbol of one quality.

(Your dealer will sell you the Silvertown in any size from 30 x 3½ up.)

THE B. F. GOODRICH RUBBER COMPANY, *Akron, Ohio*
ESTABLISHED 1870

Goodrich Silvertown CORD TIRE

"BEST IN THE LONG RUN"

There is today a very marked tendency toward sounder, more exacting judgment in the purchase of motor cars.

It is this tendency which has turned so many seekers for sounder value to the Chalmers Six.

For the Chalmers was designed and is produced with the very definite purpose of meeting the need for fine motoring at reasonable cost.

At the new price of $1185, the Chalmers Six yields nothing to any car in its price class.

As those who have made careful comparisons have learned, it is really necessary to go many hundreds of dollars above the Chalmers price to find a car that even approaches it in beauty and fine performance.

That is why it is generally conceded that the Chalmers Six represents the soundest investment among six-cylinder cars today.

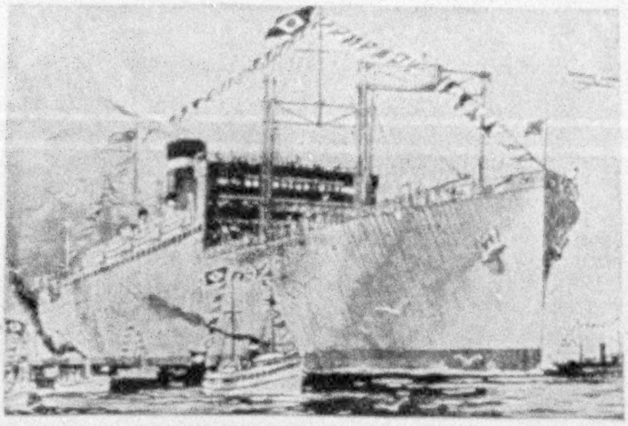
New Chalmers Six Prices

5-Passenger Touring Car, $1185 *Roadster, $1185*
7-Passenger Touring Car, $1345 *Coupe, $1595*

Prices f. o. b. Factory—Revenue Tax Extra

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada, Limited, Windsor, Ontario

The CHALMERS SIX



Fares Reduced to South America

A NEW age of travel to South America has begun. A few months ago the U. S. Government allocated four superb sister ships to the South American trade. They are by far the most luxurious on the run.

Almost immediately they set a new record for speed. Rio de Janeiro is only 11 days away. Montevideo and Buenos Aires are but a few days beyond.

The Munson Steamship Lines which operate the ships for the U.S. Government have perfected the service after 50 years experience.

Now, the fares have been cut to rock bottom.

The great Centennial Exposition at Rio de Janeiro is attracting thousands of visitors from all over the world. If you are planning to be one of them — send the information blank below.

INFORMATION BLANK
To U. S. Shipping Board
Information Desk Washington, D. C.
M. 1557

Please send without obligation the U. S. Government Booklet giving travel facts. I am considering a trip to South America ☐, to Europe ☐, to The Orient ☐. I would travel 1st class ☐ 2d ☐ 3d ☐.

If I go date will be about ____________

My Name ____________

Business or Profession ____________

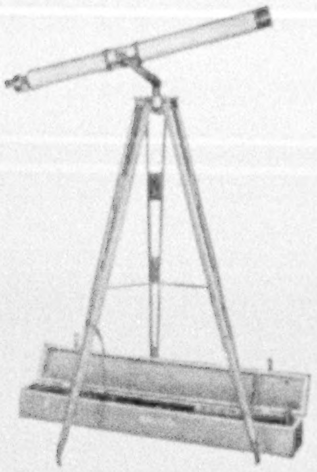
My Street No. or R. F. D. ____________

Town ____________ *State* ____________

For information regarding reservations address:

Munson Steamship Lines
67 Wall Street *New York City*
Managing Operators for
U. S. SHIPPING BOARD

—that eyes may see better and farther—



Wherever there is beauty in the distance—

Bausch & Lomb Telescopes

THE far-off mountain peak, the distant horseman, the ship on the horizon—all the details can be within easy reach of your vision through a Bausch & Lomb Telescope. And the sun, the moon and the stars are subjects for fascinating exploration. What a world of enjoyment is opened up to your home or club, if equipped with a Bausch & Lomb Telescope!

Bausch & Lomb's seventy years of scientific lens-making and their world-wide reputation for quality assure you that these American-made telescopes are second to none.

Write for our new booklet—it has illustrations, detailed descriptions and prices.

BAUSCH & LOMB OPTICAL COMPANY
602 St. Paul Street, Rochester, N. Y.
New York Washington Chicago San Francisco London

Leading American Makers of Stereo-Prism Binoculars, Photographic Lenses, Telescopes, Projection Apparatus, Balopticons, Microscopes, Magnifiers, Automobile Lenses and Other High-Grade Optical Products.

A Garden Full of Darwin Tulips for $2.00

In anticipation of again placing before our customers a collection of Darwin Tulips we have had a sufficient quantity grown so that we can offer

50 Giant Darwin Tulip Bulbs, Finest Mixed, for $2.00
selected from fifteen named varieties

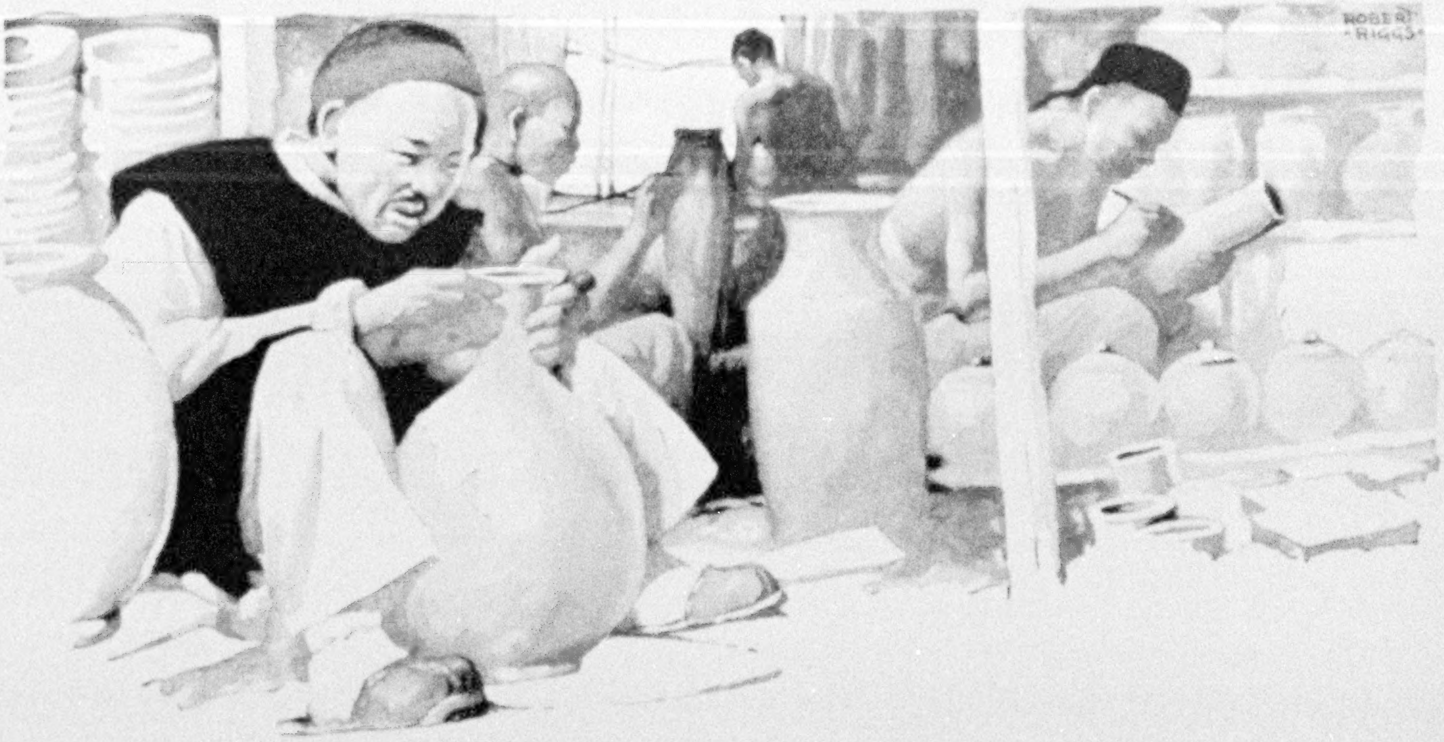
Few spring flowering plants rival the Darwin Tulip for brilliance of bloom. Borne on strong stems often exceeding three feet. They are a wonderful addition to the flower garden.

Plant any time before the ground becomes frozen, and they will bloom from the middle of May to Decoration Day.

Mail this advertisement with check, money order, cash, or stamps, and secure this exceptional collection, sent prepaid to any point in the U. S. east of the Mississippi. **For points West and Canada, kindly add 25c. to cover cost of delivery.**

Our 1922 Fall Bulb Catalogue sent on request.

Stumpp & Walter Co
30 and 32 Barclay Street New York



In an Inland Village Over Seas

RAND McNALLY

INDEXED POCKET MAPS

make traveling easier. The disturbing uncertainties of travel are minimized by these maps which give you an exact knowledge of your location, your surroundings, your route and your destination.

RAND McNALLY Pocket Maps in your traveling equipment will add comfort and enjoyment to your trip. They are made for the traveler at home and the traveler abroad. The series contains a separate map of every State of the United States, every Province of Canada and every country of the world. Each is complete, accurate and up to date. No traveler should fail to carry them.

Price 35c-50c each

Sold by book stores, stationery stores, news-stands, drug stores, cigar stores, department stores and hotels.

The oldest civilization in the world is in China. There, men used many devices we call modern before the time of Socrates. The Chinese craftsman is not excelled. The work of his hands is above reproach. He knows not machinery because he has no need for haste, and his work is good because it does not change in motif nor process. How much do you know about China?

You can go there with a RAND McNALLY International Atlas of the world without stirring from your easy chair. You can learn of strange customs in hidden provinces, of many crafts and pursuits. And in the doing of it, you'll change your mind about China and its toiling, swarming people. As you explore by the International Atlas, you can read information that will astound you. It is printed on the reverse side of each map.

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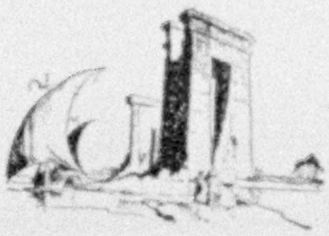
BUY RAND McNALLY MAPS WHEREVER MAGAZINES AND STATIONERY ARE SOLD

Winter Vacation Voyages

When winter comes, thoughts of the sparkling and azure Mediterranean and of the sunny and colorful West Indies make an imperative call upon the imagination of all who love travel at its best.

To the MEDITERRANEAN



ADRIATIC
24,541-tons
Jan. 6 and Feb. 24, 1923

LAPLAND
18,565-tons
Jan. 18 and Mar. 10, 1923

The splendid White Star Liner *Adriatic* and the Red Star steamer *Lapland*—world-famous for their steadiness, de luxe quarters and cuisine and service—carry passengers of discrimination to the brilliant playgrounds in Egypt and Southern Europe.

Itinerary: Madeira, Gibraltar, Algiers, Monaco (the Riviera), Naples, Alexandria (for Egypt and the Nile), Haifa for Jerusalem, and Athens (Phaleron Bay).

Ample time for delightful visits ashore (optional).

To the WEST INDIES

To Havana, Panama Canal and a delightful itinerary arranged by a Cruise Department of more than 25 years' experience in West Indies.

The White Star Line's famous *Megantic*—a magnificent cruising ship of admirable construction for tropic voyages. 20,000-tons displacement —the premier steamer to the tropics.

Sailings:
Jan. 15, Feb. 17, Mar. 22, 1923

Itinerary: From New York to Havana, Haiti, Santiago, Kingston (Port Antonio), Panama Canal (Panama City), La Guaira (Caracas), Trinidad (La Brea), Barbados, Martinique (St. Pierre), St. Thomas, San Juan, Nassau, Bermuda.

Rates: $250 upwards

28 days duration of each cruise

Write for attractive color booklet giving details of voyages you are interested in. Address Cruise Department for West Indies; Mediterranean Department for Mediterranean.

WHITE STAR LINE
AMERICAN LINE · RED STAR LINE
INTERNATIONAL MERCANTILE MARINE COMPANY

No. 1 Broadway, New York

Just as in showers—

there are definite advantages in Speakman Lavatory Fixtures

—And even to escutcheons, Speakman Showers and Lavatory Fixtures harmonize perfectly. On the lavatory shown is the Unit Acto Fixture. The one nozzle enables washing in running water at just the desired temperature.

The shower shown is the H 952½ Mixometer over a built-in corner tub. The three handles which you see are part of the Deshler Bath Fixture which also connects to the shower.

Ask your plumber or architect about these Speakman Fixtures. Your plumber has folders. If he happens to be out of them, we'll have one in your hands within a couple of days, that is, if you send us word—now.

SPEAKMAN COMPANY
WILMINGTON, DELAWARE

SPEAKMAN SHOWERS

PATTON'S Velumina

The Oil Flat Wall Paint

PORE-PROOF

Velumina Walls Are Always Sanitary

Our Paint and Varnish Advisory Board *will gladly consult with any manufacturer facing a paint or finishing problem and render recommendations without obligation. Booklet on request.*

THEY can be washed. Because Patton's Velumina is pore-proof. Dirt, grime and dust cannot penetrate or discolor the finish it gives. They can only remain on the surface of the hardy paint film and are easily removed with soap and water.

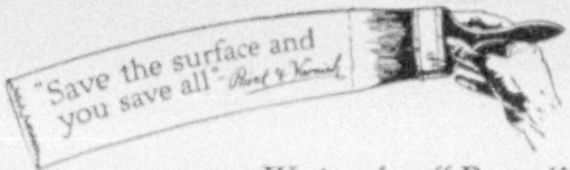
That is why this fine oil flat wall paint is so satisfactory for use in hospitals, where sanitary walls are essential; in offices, where cleanliness is a business asset; in schools, public buildings of all sorts, as well as homes.

Patton's Velumina is not merely a washable coating for walls. It is a beautiful, artistic finish that gives deep, rich, velvety tones to the walls it decorates. It gives a soft diffusion to the light, and so is a great aid to perfect illumination. Velumina walls are a decided asset to any room in any building.

Patton's Velumina comes in white and sixteen attractive colors that give a wide range of selection. It is one of the leaders in the long line of the Pittsburgh Plate Glass Company's products, each of which is famous for high quality and perfect service.

No matter what you want in the way of glass, paint and varnish products, the Pittsburgh Plate Glass Company manufactures something that will meet your requirements *exactly*. Handled by quality dealers everywhere.

A good brush is as essential as good paint.



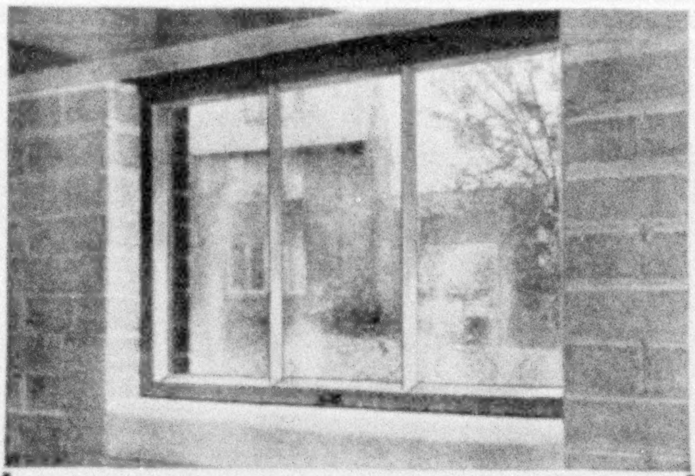
Write for "Proof" Booklet.

PITTSBURGH PLATE GLASS CO.

GLASS ~ Manufacturers ~ PAINT

Paint and Varnish Factories Milwaukee, Wis. - Newark, N.J.

TRUSCON
STEEL BASEMENT WINDOWS



Modern Basements Need Daylight

Everybody wants basements to be usable—not dark, dingy, dirt collectors. Truscon Steel Windows make light, cheery basements by admitting 50% to 80% more daylight thru each window opening.

These all-steel windows won't stick, leak or need repairs. They are always easy to open and close, locking automatically with a steel spring latch. No new house is modern without them.

Suitable for any residence or apartment, Truscon Steel Basement Windows can be had without extra cost.

Get More Information

If interested in any way in building you should know more about these windows. Merely write your name in the margin of advertisement and state whether you are home owner, architect, contractor or dealer.

TRUSCON STEEL COMPANY
Warehouses and Sales Offices in Principal Cities
YOUNGSTOWN, OHIO

For Sale by Lumber, Building Supply and Hardware Dealers

Built-in-China Bathroom Accessories

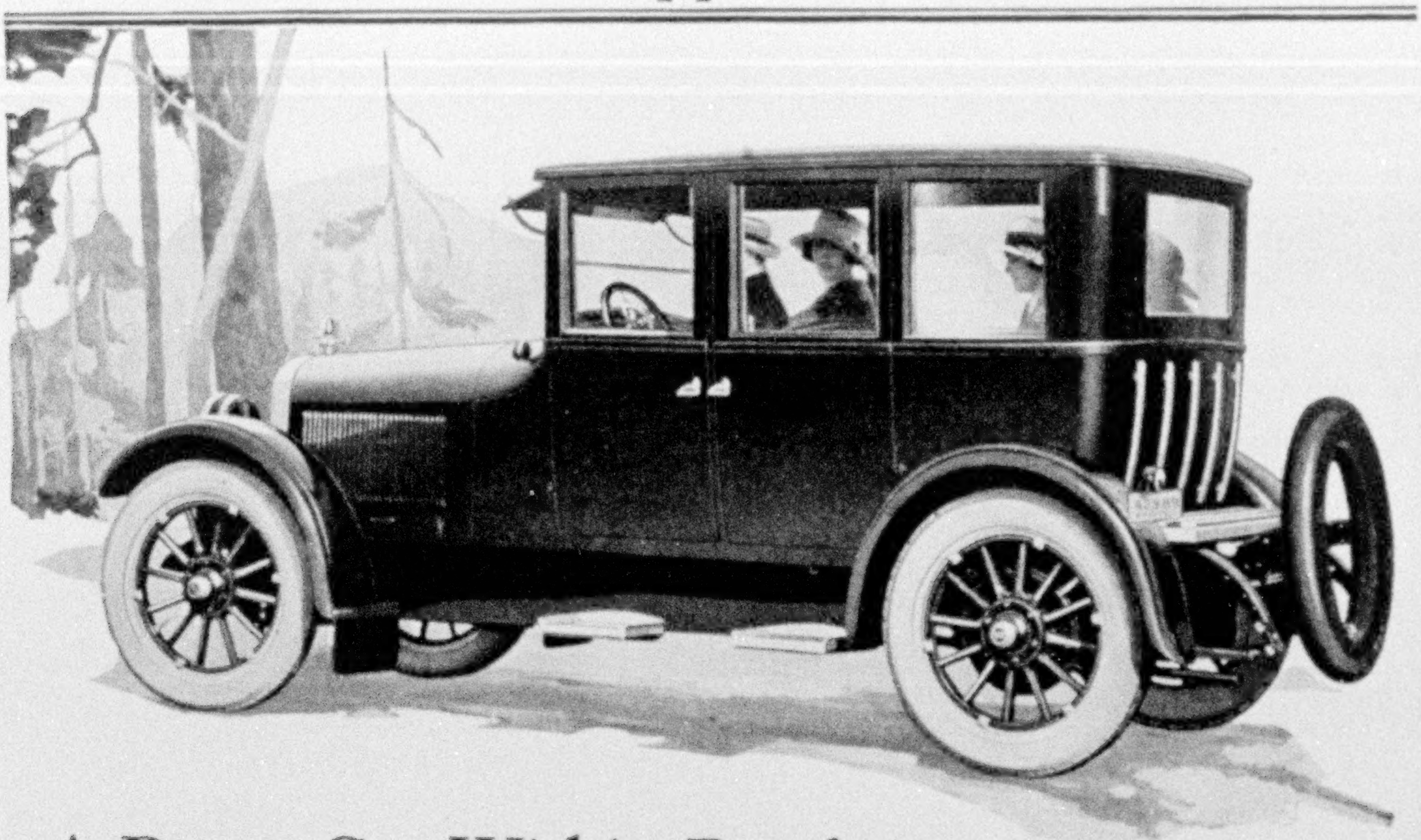
When you build, insist on having Fairfacts bathroom accessories installed in your bathroom walls. They are made of china which will not crack or stain and they will last as long as the house itself.

Fairfacts Accessories include soap dishes, tumbler and tooth brush holders, towel racks, shelves, paper holders, sponge holders and safety grips. We shall be pleased to send you our booklet *The Perfect Bathroom.*

The Fairfacts Company, Inc.
Manufacturers
234 West 14th St., New York City

Fairfacts Fixtures
BUILT IN YOUR BATHROOM WALLS

New Prices Widen Appeal of Chandler Value



A Better Car Within Reach

The new Metropolitan Sedan, at $2295, is typical of the smart, exclusive style and advanced design of the new Chandler Six

MOTOR car service, an essential factor in modern life, cannot be measured merely in terms of money. There is one infallible test of worth:

What does an automobile give in relation to what it costs? Judged on this basis, the new Chandler Six is an exceptional car.

It has superb beauty, latest style, rare comfort and masterly performance.

Fine construction and advanced design assure long and economical service.

From its first appearance, the higher value of the new Chandler Six has been conceded.

Now further reductions in price increase its investment appeal.

The approach of fall and winter lends special interest to the luxurious coupe and sedans.

THE CHANDLER MOTOR CAR CO., CLEVELAND

Export Dept., 1819 Broadway, New York City   Cable Address, "Chanmotor"

Each of the ten models, open or closed, is highest value for its type.

$1495 TO $2375

F. O. B. Cleveland

CHANDLER SIX

XUM

Date the Stick!

It's Easy to Prove Its Long Life

Of course, the main reasons why millions swear by Williams' Holder Top Shaving Stick are its thick-body lather, which softens any beard, and the glove-smooth feel that follows its use.

But its economy is important too. *You can prove how long it lasts.*

Buy a Williams' Stick and scratch the date on the metal cover. Use the stick until it is all gone. (You can use the last scrap of it.) Note the date when it is used up. Here's what you will find:

1. Williams' is the *Long Life Stick.* You will get from it an almost unbelievable number of perfect shaves.
2. Williams' makes the *Long Life Lather.* It doesn't dry on the face. It keeps moist and thick until the shave is finished.
3. Williams' gives you *Long Life Comfort.* Your shave is a pleasant incident, and all day long your skin feels soothed, refreshed, glove-smooth.

Then save the original box and get a Re-Load. The whole stick gives you the last word in economy. Learn more about this Long Life Lather. Mail coupon below.

Williams'

PATENTED Holder Top Shaving Stick

THE J. B. WILLIAMS COMPANY
Dept. 110, Glastonbury, Conn.

Send me a trial length Holder Top Stick in a large re-loadable box. 10 cents enclosed.

Name ______________________

Address ______________________

Krementz

The name "Krementz" on the back of men's jewelry represents a standard of quality that has won for Krementz jewelry the appreciation of millions of users and thousands of merchants who wisely make it their choice.

Collar Buttons	25c - $ 1.50
Links . . .	$2.00 - $ 7.00
Waistcoat Sets	$4.50 - $17.50

Only at the better shops. Write for booklet.

KREMENTZ & CO. Newark, N. J.

1048 K
Tuxedo Set
$11.00

FREE—This Book on Home Beautifying

This book contains practical suggestions on how to make your home artistic, cheery and inviting. Explains how you can easily and economically refinish and keep furniture, woodwork, floors, and linoleum in perfect condition. Tells what materials to use and *how* to use them. Includes color charts, gives covering capacities, etc.

BUILDING?

Doubtless you want the most house for the least money. Our book will help you realize that ambition without "cutting corners." Explains how inexpensive woods can be finished as beautifully as more costly varieties. If, after receiving book, you wish further information, write our Individual Service Department. Experts will gladly solve your problem for you *without charge.*

We will gladly send this book free and postpaid for the name and address of the painter you usually employ to do your work.

S. C. JOHNSON & SON, Dept. N. G. 10, Racine, Wis.
"The Wood Finishing Authorities"
(Canadian Factory—Brantford)

This photograph was taken at Khamba Dzong, Tibet, a short distance from Everest. The figure wearing the sun helmet is General, the Honorable C. G. Bruce, Commander of the Expedition. Opposite, one of the members is operating the Remington Portable. Writing from Khamba Dzong on April 13, 1922, General Bruce says: "The Remington Portable Typewriter is a very great success and we have it continually in use—it has gone through a pretty hard trial as we have taken it over several high passes in very bad weather."

Everest

The Highest Point On Earth

The heroic efforts of the hardy explorers who attempted to reach the "top of the world" have won the admiration of all lovers of true sportsmanship.

The story of this attempt to conquer the "mountain of mystery" contains one of the finest tributes ever paid our product — the fact that the day-by-day record of the expedition was written on a

Remington Portable

Service under the frightful conditions encountered by the Mount Everest Expedition may be called the extreme test of a writing machine. Under this test, the Remington Portable has given final proof of its surpassing strength and dependability. Amid mountain cold and storm, under conditions where man could hardly live, this sturdy little typewriter daily tapped out the story of effort, hardship and supreme endurance.

The Remington is the most complete of all portable typewriters—with Standard Keyboard—just like the big machines. And it fits in a case only four inches high.

REMINGTON TYPEWRITER COMPANY
(Incorporated)
374 Broadway, New York

Sold by over 2000 dealers and all Remington Branch Offices

Paragon Ribbons for Remington Portable Typewriters, 50c. each — $5.00 a dozen

Send for our illustrated "The Highest Point on Earth." Address Room 65

The Orient

via Honolulu

GOING to Japan? Longing for the land of Pagodas and dreams when November dances in with her gorgeous riot of chrysanthemums and scarlet maple leaves? Determined to forget the melancholy threat of winter in the mellow Eastern sunshine amid the gay, exquisite beauty of Japan's Autumn?

Then send the information blank and learn about *your* ships that travel to The Orient. They are among the finest on the Pacific—and they are operated by the **Pacific Mail Steamship Company,** for 54 years expert in trans-Pacific travel. The voyage is made via Honolulu over Pacific Mail's famous "Sunshine Belt" to Yokohama, Kobe, Shanghai, Manila and Hong Kong. Send the blank today.

INFORMATION BLANK
To U. S. Shipping Board
Information Div. 1557 P M Wash., D. C.

Please send without obligation the information regarding U. S. Government ships. I am considering a trip to The Orient☐, to Europe☐, to South America☐.

Name ....

Address ....

For sailings and accommodations address:

Pacific Mail Steamship Co.

508 California St. San Francisco, Cal. | 503 So. Spring St. Los Angeles, Cal. | 10 Hanover Sq. New York City

U.S. SHIPPING BOARD

Information Division 1557 Washington, D. C.

Save your Hearing

The Acousticon

Does More Than Enable You to Hear—

It Preserves and Improves Your Natural Hearing

If you do not use your arm, it quickly becomes helpless. Just so with the ears. They must be stirred to activity by increased sound or they lose all sensitiveness.

You can be the judge of hearing better and clearer by letting us loan you

The 1923 ACOUSTICON For 10 Days FREE TRIAL

No Deposit—No Expense

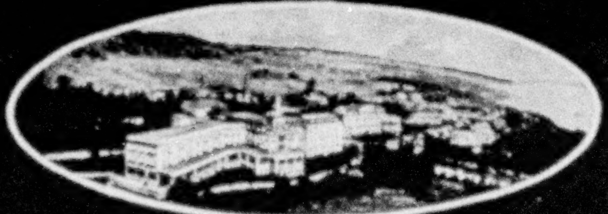
One user writes: "My hearing is so improved that I forget to use it at times . . . ."

Remember, please, if you return the Acousticon, the trial costs you absolutely nothing.

But don't let your hearing grow worse. Don't buy any hearing aid until you have first tried it—and don't neglect to try the Acousticon.

It will help you greatly and prove it without obligation. Send for your free trial today.

DICTOGRAPH PRODUCTS CORPORATION
1311 Candler Bldg., 220 W. 42nd St., New York City



THE GLEN SPRINGS

WATKINS GLEN, N. Y., ON SENECA LAKE

Open All The Year Wm. E. Leffingwell, Pres.

All advantages of European Spas without strain of ocean trip. Nauheim baths given with natural calcium chloride brine. Sporty golf course.

COOK'S

TRAVELERS' CHEQUES

In Dollars or Pounds Sterling

SAFETY - LIQUIDITY - CONVENIENCE

Holders enjoy all the inestimable advantages inherent in our network of 150 offices and our world-wide banking connections

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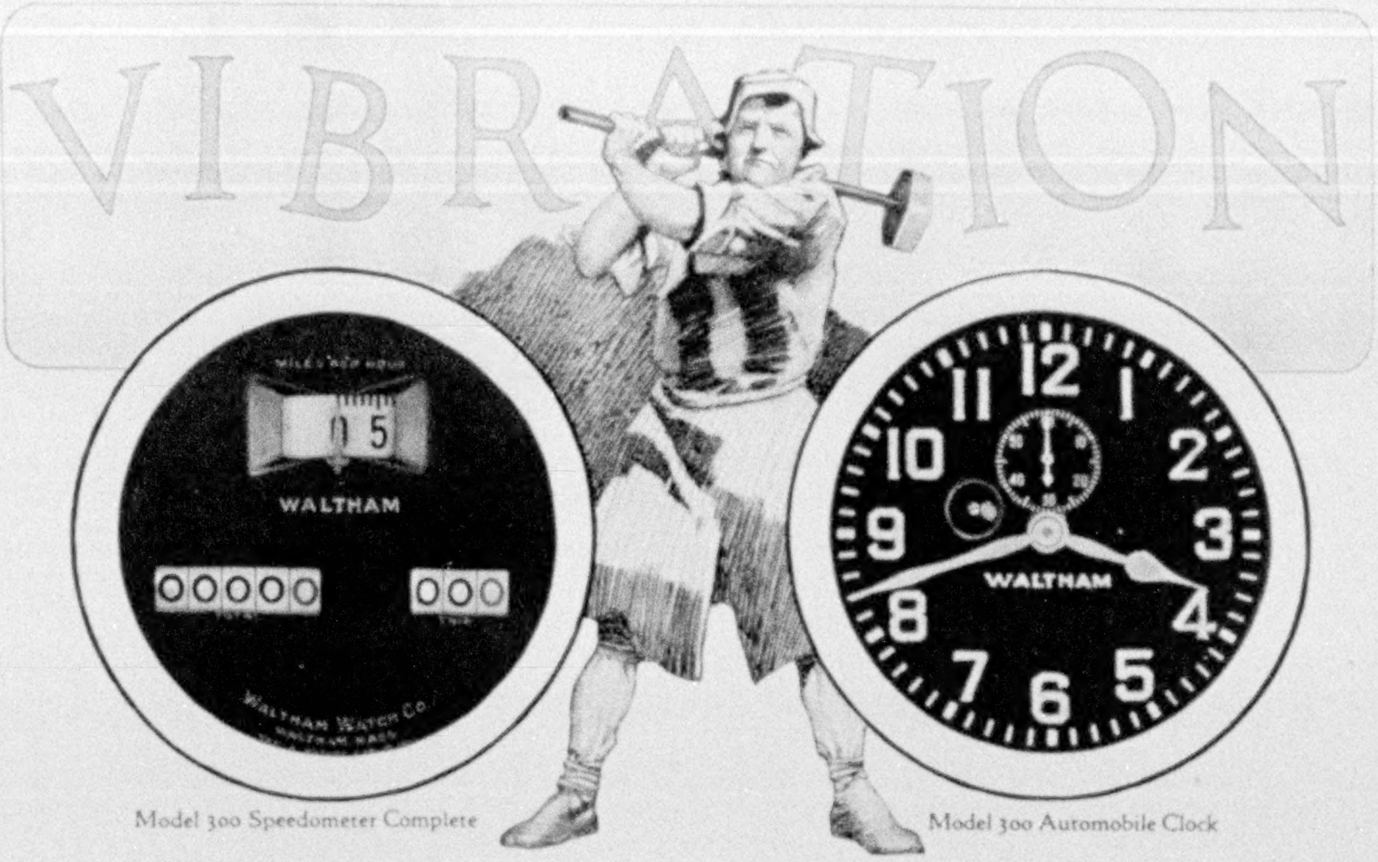
Chicago, Los Angeles, Philadelphia, Montreal, Boston, Toronto, San Francisco, Vancouver



Model 300 Speedometer Complete

Model 300 Automobile Clock

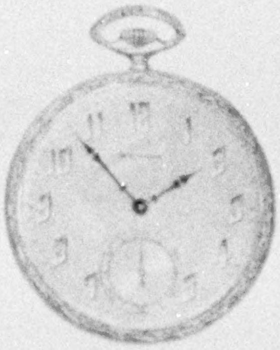
Speedometers, Clocks, and Watches

TEN thousand thousand times a day the Waltham Automobile Clock and the Waltham Speedometer are hammered by the road—slight blows, heavy blows, smashing blows, as a host of fine automobiles whirl over city streets and state roads.

Motorists marvel at these Waltham precision instruments. They set their watches by the Waltham Clock. They measure correctly miles and speed by the Waltham Speedometer. They even judge the performance of their cars by these "tellers of the truth."

The same mastery of vibration is built into every Waltham Watch. That is why Waltham Watches are famed for their time telling under the most difficult conditions. And why explorers upon land, "captains-courageous" of the sea, and the winged pilots of the air invariably specify, and demand Waltham.

The World's leading cars are equipped with Waltham Clocks and Speedometers. And men and women who invest their money wisely wear Waltham Watches.



Waltham Colonial "A" Riverside
Catalogue No. 264 — 19 Jewels
Adjusted to 5 Positions
Raised Gold Figured Dial, Carved Case
Price $225.00

The Waltham Speedometer is the only air-friction Speedometer in the world. (Invented by Nikola Tesla.) Developed and perfected by Waltham

WALTHAM WATCH COMPANY
WALTHAM, MASS.

WALTHAM

THE SCIENTIFICALLY BUILT WATCH

Send the Coupon

Chamberlin Metal Weather Strip Co., Detroit, Mich.

Tell me the cost of equipping my building with Chamberlin Metal Weather Strips (check whether home, factory, office building, church, school).

Give number of outside *doors* ______
windows ______

Name ______

Address ______

City and State ______

Eng. Dept. A-1

Save Fuel Keep Warm End Draughts

You will be surprised at the small cost of equipping your home or business building with Chamberlin Metal Weather Strips.

And they add so much to comfort, cleanliness and good household economy. They save 25% to 40% of fuel costs. Keep dirt, dust, soot and smoke from sifting in. That ends one of the most tedious tasks of housework.

Why Heat Your Building 36 Times Every Day?

Tests show the inrush of cold air at unprotected windows and doors fills the average building 36 times daily. Why fight this with fuel?

How much more simple to bar it out as thousands of good home managers do, with Chamberlin Metal Weather Strips.

At 12,000,000 windows and doors Chamberlin Metal Weather Strips permanently end fuel waste and discomforts resulting from draughts. They make homes dust-proof. Protect hangings, furnishings and decorations. End rattling doors and windows.

Healthier homes result. Children are safe from cold air currents. No cold spots. You are not driven from the bright, cheerful window by chill draughts.

Free Chamberlin Strips are used on 85% of all weather stripped buildings, including homes, banks, schools, office buildings, churches, stores, hotels and apartments.

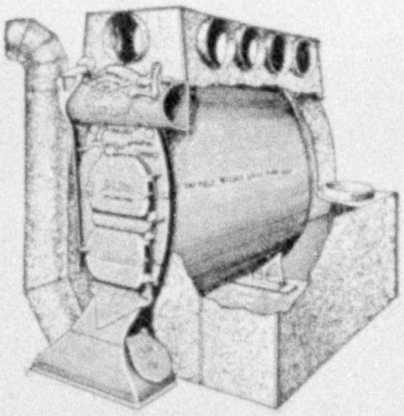
They are guaranteed to last as long as the building. Any need for service or attention, no matter how many years hence, is cheerfully done free, by Chamberlin experts. An estimate by our engineering department, on the cost of your equipment, is free. Just send the coupon.

CHAMBERLIN METAL WEATHER STRIPS
"SINCE 1893-THE STANDARD"

Conserving Next Winter's Coal

FUEL economy is essential today. Never has it been more vital than now. And yet, a healthfully heated home is more important—uniform temperature in all rooms, equalized temperature between floor and ceiling, and pure, fresh air everywhere. These results are positively assured even in windy weather through the scientific construction of—

THE FARQUAR SANITARY HEATING AND VENTILATING SYSTEM



Pure, fresh, vitalizing air, gently warmed, is carried upward into the rooms through large pipes which provide the necessary volume for a comfortable temperature and a healthful atmosphere. The FarQuar Vent and Return System prevents atmospheric stagnation and removes the contamination of personal exhalation and exudation. Annoying drafts along the floors are also eliminated. These facts, plus the FarQuar Automatic Control, insure a uniform temperature of pure, fresh air at a surprisingly low fuel cost.

Write for interesting booklet, "The Science of House Heating," which fully explains the FarQuar Principles of Heating. Mailed free on request.

The Farquhar Furnace Company
910 FarQuar Bldg. Wilmington, Ohio

Sani-Flush

Reg. U.S. Pat. Off.

Cleans Closet Bowls Without Scouring

Sani-Flush was made for one purpose—to clean the closet bowl *better* and with less labor. It removes stains, incrustations and odors *without* injury to bowl or connections. Keep Sani-Flush in your bathroom.

Sani-Flush is sold at grocery, drug, hardware, plumbing and housefurnishing stores. Price, 25c.

THE HYGIENIC PRODUCTS CO., Canton, Ohio
Canadian Agents: Harold F. Ritchie & Co., Ltd., Toronto

Good Buildings Deserve Good Hardware

CORBIN

At the Grand Central 2500 Corbin Door Checks operate the doors

Installed in 1913, when the Grand Central Terminal was completed, the 2500 Corbin Door Checks are still operating faultlessly and bid fair to serve for years to come. The annual maintenance cost of this equipment is so low as to be almost negligible.

Where door-closing service is hardest— Corbin closes the doors

NO matter how ungentle you are to Corbin-equipped doors in your rush, they are always considerate of you, assisting you to catch your train, never resisting, never talking back, never ceasing in a steadfast service of keeping out the cold, saving coal and eliminating noise.

Not only in the country's greatest railway stations, finest banks, hotels, theatres, stores, office buildings, factories, apartment dwellings, libraries, hospitals and public buildings, but also in thousands of modern homes the Corbin Door Check has been given the command over doors and is exercising its quiet authority over them.

Think of the doors in your own home that ought to have the same supervision. The kitchen door leading to the cellar—the door at the bottom of the back stairs—every screen door and service door — bathroom doors and certain closet doors—all unruly, slamming doors—all doors that should be kept closed.

There isn't a door that cannot be subdued and made to perform as it should, by the particular Corbin Door Check designed for the purpose. The Corbin Door Check is a striking example of what is meant by the term "Good Hardware", of which P. & F. Corbin make a complete line.

See your local Corbin dealer and tell him about your troublesome doors. And if you're interested in building, write for attractive, illustrated booklet, "Good Buildings Deserve Good Hardware".

P. & F. CORBIN SINCE 1849 NEW BRITAIN CONNECTICUT

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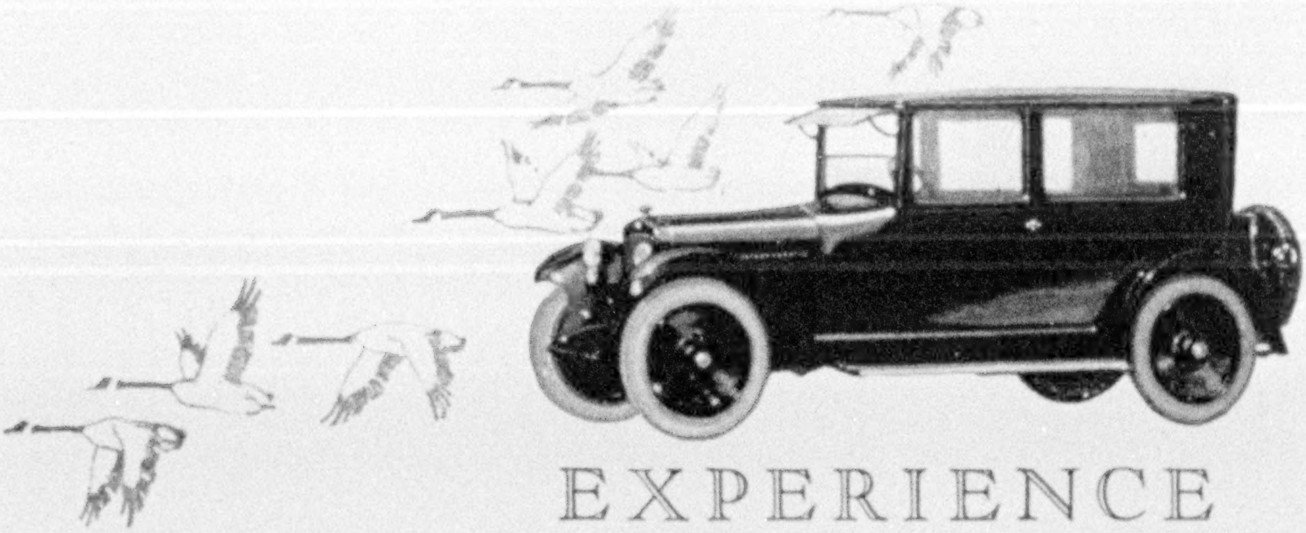

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I nominate ....

Occupation ....
(This information is important for the records.)

Address ....

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for membership in the Society

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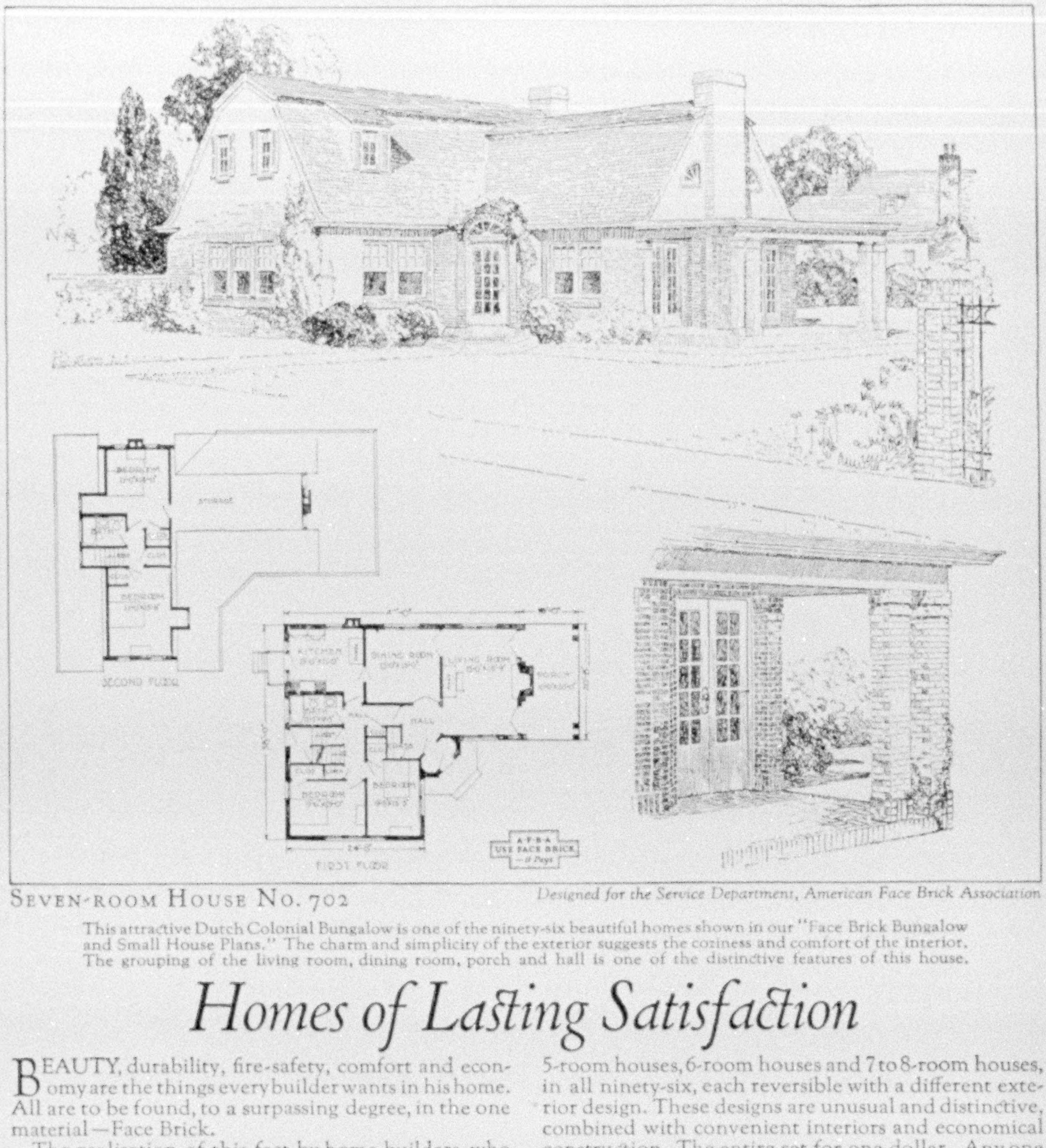
10-22 *Name and Address of Nominating Member*



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This attractive Dutch Colonial Bungalow is one of the ninety-six beautiful homes shown in our "Face Brick Bungalow and Small House Plans." The charm and simplicity of the exterior suggests the coziness and comfort of the interior. The grouping of the living room, dining room, porch and hall is one of the distinctive features of this house.

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BEAUTY, durability, fire-safety, comfort and economy are the things every builder wants in his home. All are to be found, to a surpassing degree, in the one material—Face Brick.

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We have the complete working drawings, specifications and masonry quantity estimates at nominal prices. Select from the booklets the designs you like best and order the plans, even if you are not going to build now, for their study will be not only interesting and instructive, but helpful in formulating your future plans for a home.

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Every mile a Scene worth while
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A mild, sunny route all the way with Observation Car, Through Dining Car and other comforts of modern travel. Daily Through Tourist Sleeping Car Service between Washington, D. C. and San Francisco. On or about November 1, 1922, Tri-weekly Sleeping Car Service to Globe, Arizona, for the side trip to ROOSEVELT DAM on the APACHE TRAIL will be resumed.
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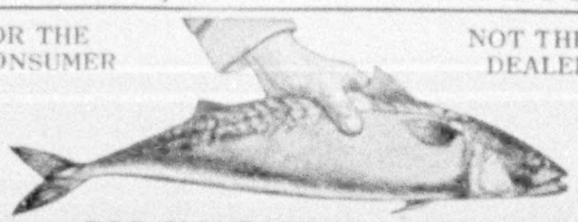

FOR YOUR OWN TABLE

FAMILIES who are fond of FISH ought to get them DIRECT from GLOUCESTER, as no inland dealer anywhere else can possibly be in a position to offer you goods as perfect and wholesome as we can.

We sell ONLY to the CONSUMER DIRECT, not through grocers or markets. We want to supply YOU, no matter how small your requirements.

We have done a mail-order fish business for thirty years, sending the goods RIGHT TO OUR CUSTOMERS' HOMES, EXPRESS PREPAID EAST OF KANSAS, and guaranteeing complete satisfaction or money refunded.

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Our SALT MACKEREL are tender, juicy fellows—broiled for breakfast they are delicious. SALT CODFISH selected and prepared by our method is unexcelled.

Much of the fresh fish you buy in the market is at least several days old. OUR CANNED FISH, being STEAM STERILIZED, is ABSOLUTELY FRESH.

Our FRESH LOBSTERS, in parchment-lined cans, go through no process except boiling (no preparation of any kind being used). Opened and packed solid in whole pieces as soon as taken from the water, they retain their crispness and natural flavor. CRABMEAT, SHRIMP and CLAMS have likewise a perfectly natural appearance and taste.

Our SALMON, TUNNY and IMPORTED FISH DELICACIES are always the best produced.

A selection of our FISH PRODUCTS should always be in your STORE-ROOM for daily use and for the preparation at a moment's notice of dozens of dainty or substantial dishes.

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Superb S.S. "EMPRESS of FRANCE"
18,481 Gross Tons, Specially Chartered

4 MONTHS' CRUISE, $1,000 and up

Including Hotels, Fees, Drives, Guides, etc. 14 days Japan, option 19 days India, and other interesting places.

Clark Originated Round the World Cruises

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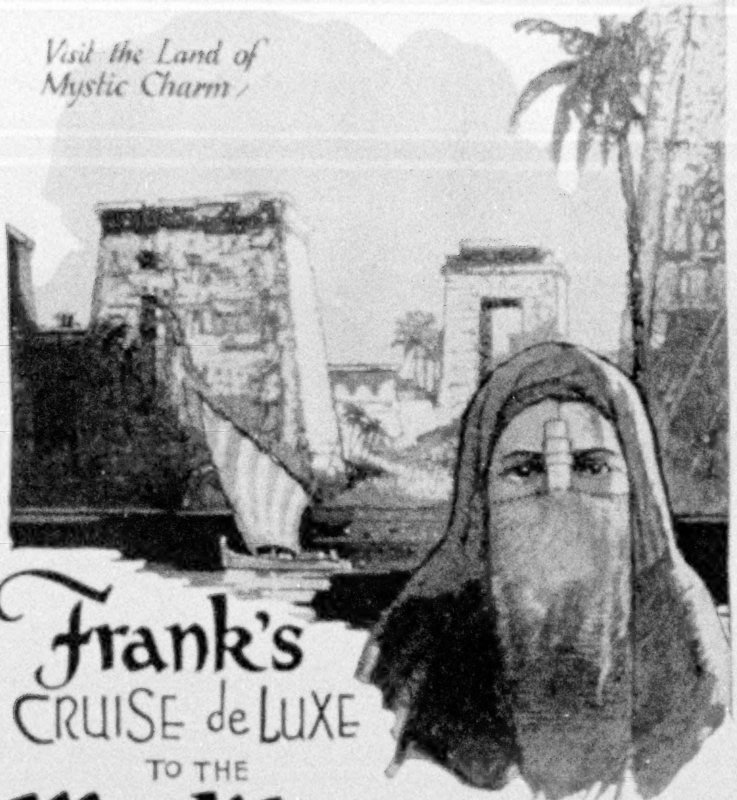

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Sailing Jan. 30, 1923, returning April 2, visiting

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Madeira, Portugal, Spain, Gibraltar, Algiers, Tunis, Holy Land, Turkey, Greece, Italy, Sicily, Riviera, Monte Carlo. etc.

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Free optional return passage at later date by any Cunard steamer from France or England.

Rates, deck plans, itinerary, and full information on request. Membership limited to 450 guests. Early reservation advisable. Apply to

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Walter Camp, Yale's celebrated football coach, has been teaching men and women everywhere how to keep fit—"on edge"—full of bounding health and youthful vitality—and how to *enjoy* doing it. Walter Camp says that a civilized, indoor man is a "captive animal," just as much as a tiger in a cage. But the *tiger* instinctively knows how to take the kind of exercise he needs to keep fit—he stretches, turns and twists his "trunk muscles"—the very same muscles that tend to become weak and flabby in indoor men and women. With Mr. Camp's permission the "Daily Dozen" exercises have now been set to spirited music on phonograph records. They supply exactly the right movements to put these vitally important "trunk muscles" into the pink of condition, and keep them there. These twelve remarkable exercises, done to music, with a voice on the record calling out the commands, are all you need to keep your whole body in splendid condition—and they take only 10 minutes a day. You will also receive a set of handsome charts, with actual photographs showing exactly the move to make at each command. It is simple as A-B-C.

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So that you may see for yourself the wonderful benefits of the "Daily Dozen" we will send you the first of the set absolutely free—for 5 days' trial. This full size, ten-inch, double-disc record, playable on any disc machine, contains the first four exercises of the "Daily Dozen." Keep this record for five days and experience for yourself the remarkable benefits to be obtained from ten minutes' daily fun.

Do not send any money. Simply mail the coupon below and we will send you postpaid, the full-sized record, with instructions and a book by Walter Camp, all for 5 days' Free Trial. After five days you may, if you wish, return the record and you will owe us nothing. But if you decide to follow the complete Walter Camp System of Health Building, as you surely will, we will send you the remaining records of the System, complete with charts containing 60 actual photographs and instructions. But do not decide until you have taken advantage of this Free Trial offer. Remember, the first record is sent you at our expense, so do not hesitate to mail the coupon now—before you forget it. Health Builders, Inc., Dept. 1810, Garden City, N. Y.

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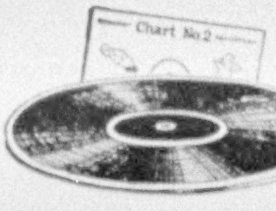

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Please send me for FREE TRIAL the first record of the famous "Daily Dozen" Exercises. I will either enroll for the complete Health Builder System or return the trial record in 5 days.

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For its readers, to an unusual degree, look to its advertising pages for practical suggestions that will help them in their business, home, and social life.

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A clean tooth never decays—the Pro-phy-lac-tic keeps teeth clean

TEPECO Water Closets
FOR EVERY PLACE AND PURSE

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SIWELCLO
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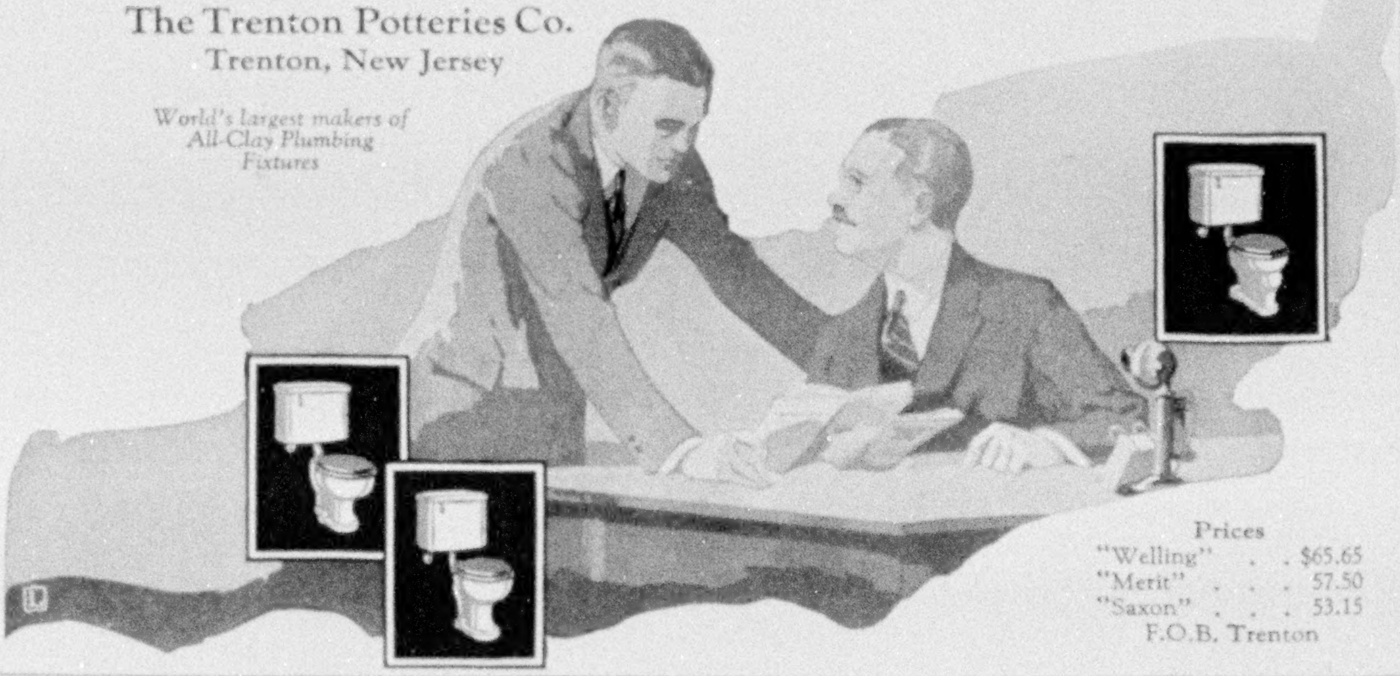
For those who feel they cannot afford a Si-Wel-Clo, we have developed other closet combinations with as many of these good features as their prices permit. Each in its class and at its price is the best the market affords.

Write for "Bathrooms of Character"

The Trenton Potteries Co.
Trenton, New Jersey

World's largest makers of All-Clay Plumbing Fixtures



Prices
"Welling" . . . $65.65
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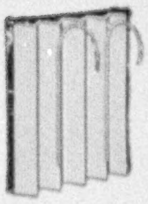

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Fill with water, hang on the back of any Radiator out of sight
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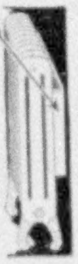

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For Windows, Porches, Sun Parlors, Etc.

You can move Savo Steel Boxes indoors or out and have beautiful flowers and plants the year round. Leak-proof and rust-proof. Six sizes. 30 Days' Free Trial. Write for Free Catalog.

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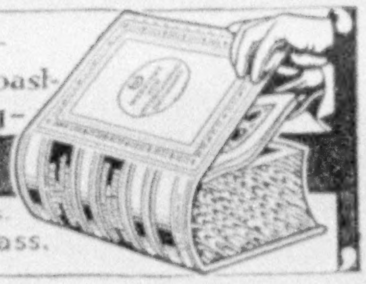

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LAFAYETTE MOTORS CORPORATION
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LAFAYETTE

VESTIBULE SEDAN

The things a woman never says —but thinks about a man's hair

TRUST a man's secretary to *know* him. There isn't much that gets by her observing and appraising eye. What she is really thinking, as she sits with pencil poised, might cause—well, it might cause a lot of things, if he knew.

Of course, she wouldn't tell him that unless he gets rid of dandruff he won't *keep* that fine head of hair. But *she* has made a study of keeping her hair looking attractive and she *knows*.

She also knows, from her own experience, that he can get rid of dandruff if he will exercise his scalp and his patience and use his ten fingers and Packer's Tar Soap.

Dandruff has a particular aversion to this well-known pine tar preparation. Doctors, you know, have long recognized that pine tar has a beneficial tonic effect on the health and appearance of the hair. As combined in Packer's with glycerine and cocoanut oil, it stimulates the scalp, penetrates to the roots, helps you to remove the dandruff and helps to bring health to the scalp. When hair health *comes*, dandruff goes—along with the other hair troubles.

Keep that nice, healthy head of hair. Use Packer's. At all druggists and department stores—everywhere.

THE PACKER MANUFACTURING CO., INC.
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Special Sample Offer

Send 25c for these 3 samples or 10c for any One of them.

Packer's Liquid Tar Soap (Packer's Shampoo) delightfully perfumed—liberal sample bottle, 10c.

Packer's Tar Soap—America's favorite shampoo cake, generous sample cake, 10c. Packer's Charm—it soothes and smoothes the skin—a sample bottle, 10c.

Also send for the Packer Manual, "How to Care for the Hair and Scalp," 32 interesting pages of helpful advice—the result of half a century of study. Free on request.

Shampoo with
PACKER'S

PRESS OF JUDD & DETWEILER INC
WASHINGTON, D. C.

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Packer's Tar Soap—America's favorite shampoo cake, generous sample cake, 10c. Packer's Charm—it soothes and smoothes the skin—a sample bottle, 10c.

Also send for the Packer Manual, "How to Care for the Hair and Scalp," 32 interesting pages of helpful advice—the result of half a century of study. Free on request.

Shampoo with
PACKER'S

PRESS OF JUDD & DETWEILER INC
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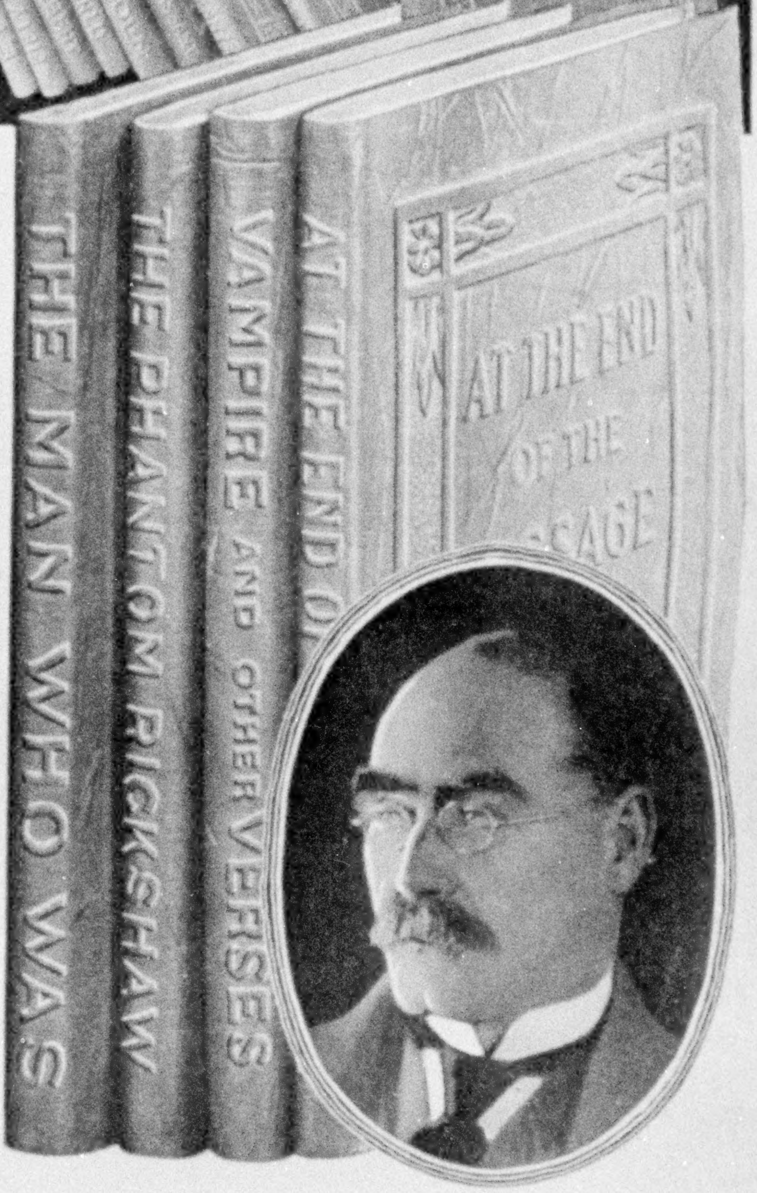

How can this incredible offer be made ?

—and why it is made. An interesting experiment in human nature.

THESE thirty volumes of the world's greatest masterpieces have been advertised several times in *National Geographic Magazine.* Many thousands of readers have purchased this set. But there are innumerable others, we have found from experience, who *intended* to send for these great books—and have put off doing so. This very human trait of procrastination is difficult to combat. So we are trying this interesting experiment to see if it can be overcome.

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